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Innovation for a Better Life



The Importance of Being Resilient

The Cyber Future of Your Business

The benefits of a connected world are enormous, but so are the risks. The solution? Be prepared to bounce back



Humans are the weakest link in the cyber risks chain.

According to a recently released report from Zurich Insurance Group and the Atlantic Council, a future where the annual costs of doing business in a connected world outweigh the benefits is not only possible, it is happening now. Modeling created for the report “Risk Nexus: Overcome by Cyber Risks?” indicates that annual cyber security costs in high-income economies already outweigh the annual economic benefits.

Annual costs don’t tell the full story, however, according to the report’s editor, Jason Healey, Senior Fellow for Cyber Statecraft Initiative, Atlantic Council’s Brent Scowcroft Center on International Security. “The benefits that we get from being connected are the results of investments, and they compound over time in the way that the costs don’t,” says Healey. “So as we look out toward 2030, the benefits from being connected are something on the order of \$120 trillion more in global GDP through 2030.”

Resilience a difference maker

That potential is the type of rising tide that can lift all boats, but on an individual business basis, some of those boats will occasionally take on heavy water. “Risk interconnectivity is the real game-changer in the cyber domain,” says Bryan Salvatore, President, Specialty Products, Zurich North America. “It makes it more likely that we may be surprised by a big event where a series of damaging risks cascade, even though we would have considered those risks as being unrelated.”

As a result, the focus for businesses in a connected world should be on how to survive and bounce back from cyber risk events. “It is very clear that businesses that want to protect themselves from cyber security privacy risks must adopt a mindset of resilience,” says Salvatore. “Resilience means identifying risks, establishing protective barriers and segmenting the data, creating rapid detection mechanisms and responding effectively—all with the goal of achieving a successful recovery.”

“Be prepared” is an excellent motto, but how do businesses actually go about preparing for the seemingly inevitable day they wake up to a cyber risk event? Salvatore says the first step is to embark on an enterprise risk management approach.

Strong security—including the mapping of critical data, how it is protected, who touches it, where it travels—and breach detection is the baseline, but to increase the level of resilience to cyber risks, collaboration across the business carries equal weight. “Management should encourage a mindset of resilience and provide training

from the mailroom to the boardroom,” says Salvatore. “Humans are the weakest link in the chain, and a security awareness and training program is the lowest-cost security measure with arguably the highest ROI. So it’s important to make sure all employees engage in ongoing training on the importance of cyber issues.”

A culture of resilience and collaboration is a major step forward, but during a cyber risk event, employees can only act as effectively as the plan that has been put in place. “Formulating an incident response plan with internal and external teams is crucial,” says Salvatore. “It’s a good idea to practice scenarios regularly so everyone knows what to do when an incident does occur.”

In fact, says Salvatore, that commitment should go beyond the four walls of any business. “Business leaders should engage with their insurance carrier’s or broker’s risk management team in an ongoing, comprehensive review of all business partner relationships, including how those vendors and partners approach their own exposures and controls.” — *Evan Rothman*

“Risk interconnectivity is the real game-changer in the cyber domain. It makes it more likely that we may be surprised by a big event where a series of damaging risks cascade, even though we would have considered those risks as being unrelated.”

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Rounding up Australian
cattle for delivery to
greener pastures

**“Let’s do it,
Bonghitters!”**

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**“If you need to solve a
particular problem, usually
the best person in the
world already works here”**

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**“I told him that
ministers can’t
behave like that”**

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Cover Trail

How the cover gets made

1

"The cover story is about the process of designing the new iPhone."

"It's not really new, is it? Aren't they just adding an 'S' to it as an excuse to make people spend more money?"

"Actually, they've spent a staggering amount of time and resources working anxiously with the understanding that there's enormous expectation."

"Seems silly to stress out so much about something that should be relatively straightforward, like a phone. There are greater problems in the world that need our attention."

"What are you thinking for the cover?"

2

"The 'YAWN' represents people's high expectations."

"Is there a different way to express that?"



3 "This works."

"Piece of cake!"



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Erika Ferrell, IT Director



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Heavy hitters



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The Path Beyond The Waves

By Dimitra Kessenides

Kos and Chios are Greek islands just 125 miles apart in the Aegean Sea. In the first eight months of the year, each saw almost 31,000 refugees, mostly from Syria and Afghanistan, land on their shores in rafts and small boats after trekking through Turkey. Kos chose to treat them one way, Chios another. The difference is emblematic of the way Europe has responded to its refugee crisis.

On Kos, Mayor George Kyritsis and local authorities did little to manage the influx. Food and water have been inadequate; no facilities were established to register and house the migrants. In late summer, the police packed 2,500 refugees into a stadium for almost 24 hours, away from the eyes of tourists. Images of cops spraying fire extinguishers to herd them circulated widely on social media.

On Chios, Mayor Manolis Vournous felt he had a responsibility to act. And so he offered a municipal building as temporary sleeping quarters; he appealed to his constituents to volunteer to help; he's repeatedly called on the national government for assistance. "It's just that you must look after somebody who's in a very difficult situation," he told National Public Radio.

Europe is torn between responses like those of Kos and of Chios. The brutal receptions by Hungary and Bulgaria—and the heartbreaking photograph of a drowned Syrian boy on a Turkish beach—prompted public displays of outrage. Xenophobia, for a brief moment, was replaced by a welcome consistent with the European Union's higher ideals. Footage of Germans cheering the arrival of refugees from Budapest was a heartening image the world needed to see. "We are all the descendants of migrants," read a placard at a French demonstration.

Virtue and common decency are more than just their own rewards. Compassion, it turns out, is also a practical way to deal with this destabilizing situation. "Where local authorities respond with humanity in a favorable way, then the situation becomes manageable—difficult but not dramatic," says Stathis Kyrousis, the head of mission for the Balkans with Doctors Without Borders. Putting people in camps—or building fences to deter their movement—won't solve the problem. "Closing borders makes life more difficult for people, but it won't stop them," says Apostolos Veizis, a physician also with

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Europe is swinging between two responses amid its refugee crisis: Xenophobia and a compassionate pragmatism

Doctors Without Borders. The migrants have fled appalling circumstances in their homelands: What else is there to lose when you have lost everything?

Until the strife in Syria, Libya, Afghanistan, and sub-Saharan Africa is ended, Europe will continue to draw increasing numbers of people seeking to raise their children in safety. Politicians cannot restore the old status quo. Instead, they must manage the crisis to minimize suffering, keep order, counter rhetoric that advocates hatred and violence against the refugees, and recognize the economic benefit the new arrivals may present.

Immigration policy is among the most complex and emotional issues any leader faces. But this crisis provides an opportunity to reform Europe's inadequate process of asylum and create a common policy. There is no cohesive system in place, and local migration laws and cross-border agreements haven't been updated for decades. Even the 1951 Refugee Convention was established to deal with asylum seekers individually, not in large numbers. According to the Dublin Convention, measures governing asylum adopted by most EU members, the country where a refugee

first arrives must process that person's asylum application. In the current crisis, that puts the responsibility for hundreds of thousands of people on the shoulders of Greece and Italy. "There's been a huge critique of the Dublin framework with the understanding now that it's the front-line states that end up bearing the brunt of the refugee crisis," says Susan Akram, a clinical professor of international human-rights law at Boston University. Germany has suspended the Dublin Convention for Syrian asylum requests and not sent refugees back to Italy and Greece.

"It is true that Europe cannot house all the misery of the world," European Commission President Jean-Claude Juncker said in a state of the union address on Sept. 9. "But let us be honest and put things into perspective." Juncker presented a plan for member countries to take in a total of 120,000 asylum seekers, calling for mandatory quotas for each country and building on a proposal from last May to relocate 40,000 refugees in Europe. The latest plan would require Germany to take in a total of 41,000 refugees and France 24,000 over the next two years. The quotas are based on population, economic growth, unemployment, and the number of asylum applications already processed. Greece, Italy, and Hungary are exempt because they've taken in more than they can handle. Ireland, Denmark, and the U.K. opted out of the EU's refugee policies when they were devised and aren't required to take refugees. They can volunteer.

The proposed quotas are "a very small step in the right direction," Akram says. Europe is shouldering a minor part of the more than 4 million Syrians displaced in recent years. Most of them are in Jordan, Lebanon, Egypt, and Turkey, which alone has taken in almost 2 million.

Most European ministers are expected to agree to some quotas at a summit scheduled for Sept. 14. As the leader of Europe's largest economy, German Chancellor Angela Merkel will be instrumental in forging such an agreement and persuading others to participate. From January to July, Germany has taken in more than 218,000 refugees. "Merkel has been the smartest about this," says François Crépeau, a professor of public international law at McGill University and the United Nations' special rapporteur on the human rights of migrants. At a time when the population of Germany is aging and has one of the world's lowest birthrates, Merkel is thinking about replenishing its shrinking workforce and maintaining its economic strength. "Her actions say, 'Openness is not a threat to German institutions, to the German population,'" Crépeau says. The Syrian refugees come highly qualified to

"We are fighting against the Islamic State. Why are we not ready to accept people who run away from that conflict?"

work—they're educated and can integrate more easily. Merkel is trying to lead by example, says Angeliki Dimitriadi, a migration expert with the Hellenic Foundation for European and Foreign Policy in Athens. "It has to do with what she believes are Europe's obligations and ethics," she says. In fact, Vice Chancellor Sigmar Gabriel has said Germany could take up to 500,000 refugees a year for several years.

Most migration experts agree that a longer-term solution will require the participation of Canada and the U.S., which has taken in only 1,500 Syrian refugees since 2011. To deal with the Vietnamese boat people at the end of the 1980s, "the biggest countries got together, and between them they divvied up a million boat people and resettled them. It's reasonable and possible," says Dawn Chatty, a professor of anthropology and former director of the Refugee Studies Centre at the University of Oxford. Germany and others should move to create a policy to let refugees travel safely and legally, without risking their lives on dinghies. "Unless you provide solutions for mobility, migrants will provide for them on their own," says Crépeau. In his speech, Juncker saw how strategic objectives in the Middle East are tied in. "We are fighting against the Islamic State," he said. "Why are we not ready to accept people who run away from that conflict?"

For now, governments must allow non-governmental organizations, including the UN High Commissioner for Refugees (UNHCR) and Doctors Without Borders, to keep conditions humane. In some areas, like on Kos, the NGOs have been blocked from providing relief. "We have written to the mayor and authorities of Kos about identifying sites for settling the people waiting for registration and to put camp managers, paid for by UNHCR, in place, and they did nothing," Doctors Without Borders' Kyrousis says.

What is occurring across Europe is undeniably a crisis, and the numbers will get worse. The UNHCR estimates that by the end of 2015, more than 400,000 migrants will have crossed into Europe via the Mediterranean, more than double than in 2014. But bad situations can be kept from getting worse, not with walls but with solidarity. Merkel and the mayor of Chios are taking the compassionate yet pragmatic route. Humanity will be better served if others develop the will to do the same. **B**

It's Payback Time For the Gulf States

Obama needs to reward the region with a U.S. missile shield



No matter how the White House describes it, King Salman of Saudi Arabia's meeting with President Obama on Sept. 4 was about payback. The Saudis had given Obama what he wanted: an endorsement of his nuclear pact with Iran. And in return for that approval, they and their Gulf neighbors are looking for some concrete assurances that the deal won't imperil their safety.

Salman was a notable no-show when Obama had Gulf State leaders to Camp David in May to sell them on the deal. Those who did come pressed him for a security treaty committing the U.S. to come to their defense if they were attacked. Obama demurred, as he had to: The U.S. is rightly wary of such deals, which have to be approved by Congress. Instead, Obama gave vague reassurances of support and promised increased arms sales.

Now that the Iran deal looks certain to make it past a congressional vote of disapproval, Obama can afford to be more forthcoming. There are several ways for him to assuage the leaders' fears that the U.S. is abandoning them.

First, the U.S. could give the Gulf States a promise of "extended deterrence," similar to the nuclear umbrella provided to Europe during the Cold War. This would not be a promise to respond in kind if Iran or another hostile party used nuclear weapons against them (the U.S. has adequate conventional weaponry capable of a devastating response that alone should deter the Iranians from doing anything stupid). It's an agreement that Obama could probably make without congressional approval; Hillary Clinton brought it up as secretary of state in 2009.

The second thing Obama could do is pledge to provide the overall architecture for a missile-defense system against Iranian aggression. The U.S. is cooperating with several Gulf States in the building of isolated antimissile systems. This is no way to build a safety net. Rather, a single system is needed for the region, and only the U.S. can provide it. Key to this shield will be the more up-to-date defense technologies already in the U.S. arsenal, such as a land-based version of the Navy's Aegis combat system.

The president could also offer other advanced weaponry currently not available to the Arab states, such as so-called bunker-

buster bombs that could penetrate Iran's underground facilities. Nothing the U.S. agrees to should violate its policy of ensuring that the "qualitative military edge" in the region lies with Israel—which happens to support Arab efforts to contain Iran.

Last, the president needs to publicly and privately reassure Salman that neither the outreach to Iran nor the administration's desire to "pivot" to Asia represent a lessening of the U.S. commitment to Middle East security. This is a case in which words of support can have a tangible effect, especially among Gulf leaders prone to conspiracy theories about U.S. abandonment.

The U.S. is taking a giant leap of faith with its nuclear pact with Iran. It owes the Gulf States some measure of reassurance for taking that leap along with it.

The Other Ways to Honor McKinley

Ohio shouldn't be upset that a peak is no longer named for a native son

House Speaker John Boehner believes the federal government should allow states greater freedom to govern themselves. Except when it comes to naming their mountains. Boehner joined many of his Ohio colleagues in criticizing President Obama for removing the name of President William McKinley—proud son of Niles, Ohio—from a mountain in Alaska. One Republican member of the Ohio delegation called it "insulting to all Ohioans."

Yet McKinley never visited Alaska, which would not become a state until more than 50 years after his death. That his name ended up on the highest peak in North America is a fluke. A gold prospector dubbed it Mount McKinley in 1896, either as a tribute to the new Republican presidential nominee or a partisan payback to the proponents of free silver (McKinley was a defender of the gold standard) he had met in the wilderness.

The details don't much matter. McKinley's connection to the mountain is a political curio that Alaskans have long been eager to leave behind. Instead, they call it Denali, a native Alaskan name connoting its great height. In 1975, Alaska officially named it Denali and petitioned the federal government to do so, too. But Ohio's lawmakers have stood in the way for 40 years.

There are lots of ways to commemorate McKinley, a Civil War veteran whose presidency was characterized by expansionism abroad (the U.S. annexed Puerto Rico, the Philippines, Hawaii, and Guam during his tenure) and protectionism at home. But any such honors ought to relate to his life and work. If Ohioans want to elevate McKinley's memory, they could look to their own state. Campbell Hill, the highest point in Ohio, is a former Air Force base that's been transformed into a career-technical school for high school students and adults. How about calling it McKinley Hill?

Better yet: Since McKinley was assassinated by an anarchist with a gun, and gun violence remains a plague on American life, Ohio's congressional delegation could push for common-sense laws that prevent people with records of criminal activity or mental illness from acquiring guns. That would be a mountainous achievement worthy of McKinley's name. **B**

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FUTURE**



Dairy Farmers at the



► Reduced demand from Russia and China triggers a milk glut and lower prices

► “We don’t see any major recovery in sight”

Barricades



Police in Brussels
confront protesting
farmers, who want
the return of quotas

Talk to dairy farmers in Britain, the U.S., New Zealand, Canada, Argentina, and countries worldwide, and you'll hear the same thing: Times are tough. Russia's ban on European Union milk and the EU's removal of production quotas have driven local prices down 20 percent in the past 12 months. That's why 6,000 farmers and 2,000 tractors converged on Brussels on Sept. 7 to protest EU farm policies. Audrey Le Bivic, a dairy farmer from France's Brittany region, was grim: "I cannot pay my bills. If tomorrow I can no longer buy food for my cows, they will not produce any more milk, and I cannot let my cows starve."

The world is awash in milk, with global trade in whole milk powder at its lowest since 2011, the U.S. Department of Agriculture says. For the first seven months of 2015, American dairy exports were down 28 percent, compared with the same period in 2014, says the U.S. Dairy Export Council; the USDA expects purchases of whole milk powder by China, the world's biggest dairy importer, to drop 40 percent this year. The former No. 2 importer, Russia, has banned imports from not only the EU, but also the U.S. and Australia in retaliation for sanctions imposed to protest Russian intervention in Ukraine. "We don't see any major recovery in sight," says Pekka Pesonen, secretary general of Copa-Cogeca, a farm lobby in Brussels.

The Brussels demonstrations were the culmination of a summer of unrest in the countryside. French farmers blockaded highways; their Lithuanian counterparts dumped 30 tons of milk to highlight their plight. In the U.K. angry farmers raided supermarkets and emptied shelves of milk to pressure retailers including **Wal-Mart Stores** to commit to higher prices. "Dairy farmers have been losing huge amounts of money," says Rob Harrison, an English farmer.

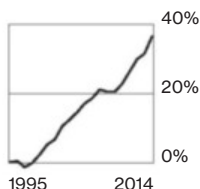
China and Russia aren't the only culprits. Record prices last year primed farmers to bolster output in the U.S., where milk production in 2015 will reach 208.7 billion pounds—the fifth consecutive record-setting year. In April the EU, seeking to liberalize trade, removed quotas that had been in place for the past 30 years, leading to increased production from Ireland, the Netherlands, and the U.K. China is producing more milk thanks to ▶

◀ investments such as a \$140 million, 20,000-cow facility that **China Modern Dairy Holdings**, partly owned by private equity firm **KKR**, unveiled in 2013. The Chinese are also consuming stockpiled milk powder and importing less. Global milk supply grew 3.7 percent last year, almost triple the growth rate of 2013, the USDA says.

Dairy gluts have recurred since countries became more open to trade in the 1980s, says Andrew Novakovic, an economics professor at Cornell. Because cows don't have an on-off switch, increases in supply are harder to slow when demand drops unexpectedly. "If you overshoot because Russia's closed down and China's having an off year,

Global Milk Production

Change since 1995



prices go in the tank," he says. The U.S. has lost more than 76 percent of its dairy farms in the past 25 years. "This is a problem of globalization," he says. "You are exposing yourself to a lot of risk without a lot of control."

Fonterra, New Zealand's largest dairy cooperative, announced on Sept. 1 that it would offer interest-free loans to farmers. **Hope Dairies**, a unit of Hancock Prospecting, which is owned by Australian resources billionaire Gina Rinehart, has shelved plans to open an A\$500 million (\$349 million) dairy farm and milk powder facility in Queensland. **Agri-Mark**, a New England cooperative with \$1.1 billion in sales last year, began dumping milk in June for the first time in a half-century.

Paul Doton, owner of a 130-cow dairy farm near Woodstock, Vt., is keeping production steady. Prices aren't covering his costs, but he still needs to sell milk to make his loan payments. "Everyone anticipated there'd be more supply, but we didn't think we'd see the demand drop the way it did," he says.

The dairy downturn has added an obstacle to the Trans-Pacific Partnership free-trade negotiations. New Zealand is demanding greater access to markets in Canada, Japan, and the U.S., which are feeling pressure from local farmers to hold on to protections that limit imports. During the latest round of TPP talks, in August, the government of Canadian Prime Minister Stephen Harper, facing a tough reelection battle in October, led the opposition to market

liberalization. The meeting ended without an agreement.

In earlier slowdowns, exporters could count on ever-growing demand from China, but with the economy sputtering, Chinese consumers aren't proping up the market anymore. Also, a false botulism scare affected the exports of Fonterra to China. India, the world's biggest consumer of dairy products, isn't much help. India will need to import by 2020, says agriculture company Cargill, but for now is self-sufficient. Overcapacity "is a long-term problem that a short-term fix won't address," says Robbie Turner, head of European markets at Rice Dairy International.

Production in New Zealand could fall more than 8 percent in the 2015-16 season, says Michael Harvey, an analyst with Rabobank in Melbourne. Many farmers are taking the painful step of culling their herds. Chris Lewis has 1,150 cows in the Waikato region of New Zealand's North Island, 8 percent fewer than in 2013. He's seen bad times before and says the industry will turn around when demand picks up from China and Russia. "It's just a matter of time till they come back to the market," he says. For now, "the mood is very somber."

—Bruce Einhorn, Alan Bjerga, and Whitney McFerron, with Marine Strauss

The bottom line Milk gluts have been an unfortunate byproduct of globalization and the dismantling of quotas.

"Hong Kong still needs to face the challenges brought by the fluctuating financial markets, weak foreign trade, and slower tourism."
—John Tsang

and sells the two currencies. Whenever the Federal Reserve raises or lowers interest rates, Hong Kong follows suit.

With Fed officials poised to raise rates, Hong Kong is caught

between tightening monetary policy in the U.S. and the economic slump of its main trading partner, China. If the Fed makes a move soon, Hong Kong will have to raise interest rates even as the mainland's slowdown puts pressure on Hong Kong wages and property prices. "It's a double whammy," says BNP Paribas economist Mole Hau.

China's surprise devaluation of the yuan last month helped trigger currency declines worldwide and increased speculation about Hong Kong's willingness to keep putting up with such pain. In the options market, bets on an end to the peg jumped to their highest in more than a decade. On his blog in late August, Hong Kong Financial Secretary John Tsang warned that the economy may slow from the 2.6 percent growth rate it managed in the first half of the year. "Hong Kong still needs to face the challenges brought by the fluctuating financial markets, weak foreign trade, and slower tourism," he wrote.

Hurt by the Chinese devaluation as well as low prices for oil and other commodities, regional currencies have declined an average 6.4 percent against the U.S. dollar in the past six months. That's making the prices at the city's stores more expensive for visitors, including the Chinese.

As tourist arrivals from China fell 9.8 percent in July compared with a year earlier, the Hong Kong retail industry's sales for the month fell 2.8 percent to HK\$37.6 billion (\$4.85 billion). That was the fifth consecutive month of declines, and it was much worse than the 1.2 percent contraction economists surveyed by Bloomberg had predicted.

Home prices in Hong Kong have increased 60 percent since 2010, fueled by strong demand from the mainland and low interest rates. But Hong Kong in August had the weakest home sales in 17 months. With the stock market plummeting, "nobody was in the mood to buy an apartment," says Louis Chan, chief executive officer of the residential unit of Centaline Property Agency, one of the city's two largest brokers. Home prices may start falling as much as 10 percent a year starting in 2016, says Cusson Leung, an analyst with JPMorgan Chase.

Currencies

Hong Kong Suffers for Its Devotion to the Peg

▶ The link to the greenback makes the city expensive for the Chinese

▶ "Nobody was in the mood to buy an apartment"

Hong Kong has pegged the value of its dollar to the greenback since 1983. The peg was meant to ensure financial stability as the city embarked on the long process of re-integrating with China. Since then its currency has been one of the most stable in the region. To lock the HK dollar's trading range against the greenback into a narrow band, about 7.75 to the U.S. dollar, the Hong Kong Monetary Authority (HKMA) buys

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So Far,
No Good

Investors and economists have been talking about the peg's demise since China regained control of the city in 1997. There's always the possibility of the HKMA pegging the HK dollar to the yuan instead of the greenback. Zhang Yichen, chairman and CEO of Citic Capital, the Chinese investment bank, says that won't occur soon. Speaking at the World Economic Forum in the Chinese city of Dalian on Sept. 9, Zhang said the Hong Kong government will be hard-pressed to end the peg until the yuan becomes a truly convertible currency, meaning that it must be exchangeable for foreign currencies in unlimited amounts. —*Bruce Einhorn, Fion Li, and Enda Curran*

The bottom line Hong Kong's peg to the dollar means that when the Fed raises interest rates, Hong Kong must follow suit.

Emerging Markets

Indonesia's President Disappoints His Fans

► **Joko Widodo battles slumping exports and slow bureaucrats**

► **Jokowi's "administration remains disorganized"**

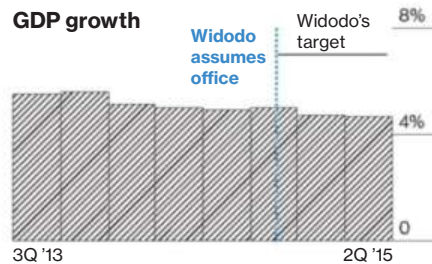
Joko Widodo, the president of Indonesia for the past 11 months, won the job in part by stressing what he was not: He wasn't corrupt; he wasn't a member of the elite; and he wasn't a big player in any of the parties that had dominated politics since Suharto, the authoritarian ruler toppled in 1998. Widodo, known by his nickname Jokowi, gained national recognition for skillfully running Jakarta, the capital. He would walk the streets and ask common citizens what they needed. During the presidential campaign, he was treated like a rock star, triggering comparisons with President Obama. He won 53 percent of the vote.

Hopes are fading that Jokowi can deliver on his promise to boost growth to 7 percent a year. Instead the economy will probably grow 5.5 percent this year, as exports of coal, rubber, tin, and palm oil to China fall due to weak demand. Indonesia needs at least 6 percent growth to generate enough jobs for young adults entering the workforce.

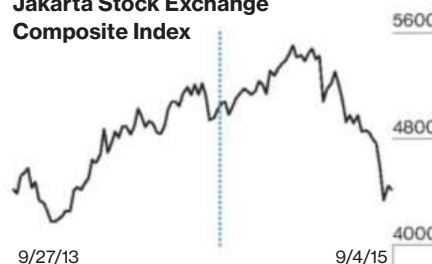
Hemmed in by his ruling coalition and a Byzantine bureaucracy, Jokowi

Joko Widodo promised an economic turnaround in Indonesia. He hasn't delivered.

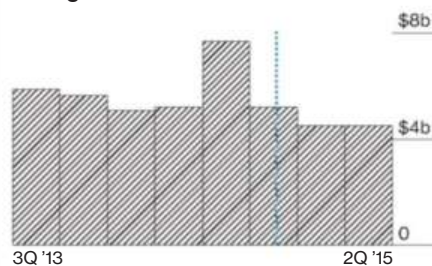
GDP growth



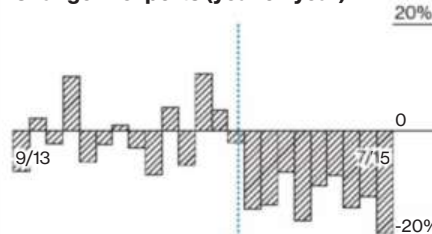
Jakarta Stock Exchange Composite Index



Foreign direct investment



Change in exports (year on year)



16%

Decline in the value of the Indonesian rupiah against the U.S. dollar since Widodo took office in October

faces falling popularity with voters and frustration among business leaders. Jokowi is "not very competent" says Hary Tanoesoedibjo, founder of the conglomerate MNC Group. He says the government needs to attract more investment.

The stock index is down 17 percent this year. The last time the rupiah was this weak, it helped topple Suharto. "The administration remains disorganized," says Bambang Soesatyo, treasurer of the opposition Golkar party, Suharto's old political base. "That's because of the leader's lack of authority."

The president governs about 17,000 islands. He must deal with local officials who wield a great deal of power, oligarchs who control much of the mineral wealth, and ubiquitous corruption. Jokowi has had some success: He scrapped subsidies on gasoline: Overall, subsidies cost the budget 240 trillion rupiah (\$16.8 billion) last year. He's budgeted 290 trillion rupiah for infrastructure spending in 2015, the most in the country's history. The National Mandate Party, a moderate Islamic group, just joined his coalition, giving Jokowi 46 percent of the seats in Parliament. "I see an improvement in the political situation," says Christian Kartawijaya, president director of Indocement Tungal Prakarsa, one of Indonesia's largest cement makers. "The government has a good will. It has to make investments, and the private sector will join them."

Jokowi has confused voters and investors by flip-flopping on policy. He's scrapped a planned toll road tax and a requirement that foreigners pass an Indonesian language test to get a work permit. He's acknowledged these U-turns damage his credibility. His chief of staff didn't respond to requests for comment.

Jokowi reshuffled his cabinet in August. Hours into his new job as coordinating minister of maritime affairs, Rizal Ramli publicly called the government's goals for electricity generation unrealistic and criticized the state-owned airline for its plans to buy planes from Airbus. At an Aug. 19 meeting of the new cabinet, Vice President Jusuf Kalla told off Ramli.



Widodo

"I told him that ministers can't behave like that," Kalla says. Ramli says he was appointed to "rock some boats."

As of mid-July, the public works ministry, which holds 40 percent of the infrastructure budget, had spent only 20 percent of the funds. "The problem is bureaucracy," says Adityawarman, president director of state-owned toll road company Jasa Marga. The government is struggling to acquire land needed for infrastructure, straighten out overlapping regulations, and cut the time needed to issue building permits.

Faisal Eky, a jobless high school graduate, waited in line to see Jokowi at an election rally and voted for him. "I got caught up in the excitement during the campaign, and since then there has been little to show for it," he says. "I think Jokowi still cares for the common man, but he is clearly not superman."
—Chris Brummitt, Fathiya Dahrul, and Herdaru Purnomo

The bottom line A commodity slump and drop in investment has forced Jokowi to scale back projections of gross domestic product growth.

Energy

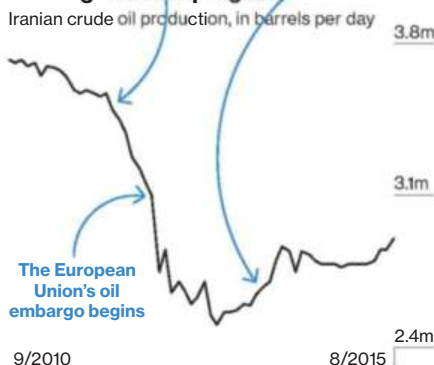
Iran Gets Ready To Sell to the World

- ▶ In anticipation of the end of sanctions, its tankers get moving
- ▶ "The doors are open" to the Americans like all the others

Before the most recent round of sanctions went into effect three years ago, Iran was able to sell oil to 21 countries. By mid-2012, that was down to six: China, India, Japan, South Korea, Taiwan, and Turkey. Rather than immediately pull back on production, and risk damaging oil wells by slowing them down, Iran decided to store its excess crude. As it scrambled to build onshore tanks, the government loaded millions of barrels onto its suddenly out-of-work fleet of crude-carrying vessels.

The Iranians eventually reduced their oil output by about a third, to a low of 2.5 million barrels a day in mid-2013, according to data compiled by Bloomberg. As exports fell to 1 million to 1.5 million barrels a day, Iran kept filling its tankers with oil it couldn't sell. By this summer, a large portion

Priming the Pump Again?



of its tanker fleet, one of the world's biggest, sat parked off the coast, filled with 50 million to 60 million barrels of crude and condensate, a lighter form of oil used to make petrochemicals.

Since the nuclear agreement between Iran and six other nations was reached on July 14, the regime has been preparing to ramp up its exports and sell that stored oil. A small number of Iranian tankers believed to have been storing crude has left the Persian Gulf in the past several weeks, according to data compiled by Bloomberg. Three of those ships have since disappeared from detection by failing to report their location.

Iran's crude output has been rising for two years and now stands at about 2.9 million barrels a day, the highest level since 2012. It won't be allowed to sell that extra crude until sometime next year, when the International Atomic Energy Agency verifies that Iran has complied with curbs on its nuclear program. The monitoring needed for that to happen probably won't be in place until January or February, say three Western diplomats familiar with the nuclear monitoring process.

Oil Minister Bijan Namdar Zanganeh says sanctions will be lifted sooner. When they are, he says, production will rise immediately by a half-million barrels per day, and after four to five months, by an additional half-million barrels. He says that by then, "we will reach to a figure between 3.8 and 3.9 million barrels a day." Saudi Arabia is pumping 10.5 million barrels daily.

Even if Iran can increase production as quickly as Zanganeh claims, it may have to incentivize buyers by offering lower prices or by trading oil for goods or services, says Sara Vakhshouri, president of SVB Energy International, an energy consulting group in Washington. That's because the Saudis have used

long-term contracts to lock in customers who not long ago bought Iranian oil.

The sanctions put in place in 2012 shrank the economy by about 10 percent by March 2014, according to the U.S. Congressional Research Service. A report by Anthony Cordesman of the Center for Strategic & International Studies in Washington estimates that Iran needs about \$170 billion to develop its oil and gas potential. The decline in oil prices has led to a drop in Iran's own investment in its oil and gas sector—from \$40 billion in 2011 and 2012 combined to only \$6 billion last year, Zanganeh says. The International Energy Agency estimates about half of Iranian production comes from oil fields that are more than 70 years old.

Much of the money Iran has made through its remaining crude exports since 2012 is being held in escrow accounts in the various countries still buying Iranian crude. To reduce Iran's access to cash, Congress passed a law requiring that Iran spend oil revenue only on goods from its customer countries. The Department of the Treasury estimates Iran will be able to retrieve half that amount, or about \$56 billion. That's still not enough to restart full oil production. And so the government is looking for foreign investment.

Since July, political and business delegations from Austria, Germany, Italy, and Spain have visited Tehran. "I think European companies are very eager to be involved in our projects," Zanganeh says. Iran has not met with U.S. companies, he says. "It seems they have received the order from the U.S. government not to have the meeting. The doors are open for them like others."

Some Iran watchers say Western companies will proceed with caution. "You're not going to see an energy gold rush in terms of capital investment in Iran anytime soon," says Mark Dubowitz, executive director of the Foundation for Defense of Democracies in Washington and a supporter of tougher sanctions. "The majors are still reluctant to make multi-billion-dollar commitments to Iran."

—Matthew Philips and Golnar Motevalli, with Jonathan Tirone, Julian Lee, and Grant Smith

The bottom line Iran says it will be pumping 3.9 million barrels a day by March, but its oil fields are old and need investment.

B Edited by Christopher Power
Bloomberg.com



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Stetson's Cowboy Spirit Lives On



In August, Izumi Kajimoto and four co-workers traveled to Salida, Colo., for the latest stop in the Gentlemen of the Road Stopovers concert series. The event, headlined by the folk rock group Mumford & Sons, features indie bands such as the Vaccines and Jeff the Brotherhood—and thousands of concertgoers in their 20s and 30s. But Kajimoto wasn't there for the music. The chief executive officer of 150-year-old Stetson was there to promote her company to the tattoo set. And rather than pushing its iconic cowboy hats, her team was there to sell fedoras, beanies, even Panamas.

The events filling Kajimoto's travel calendar cover the cultural spectrum. In October her team will head to Joshua Tree, Calif., for Babes Ride Out, a women-only motorcycle camp, to set up and run a Stetson hangout. Bikers can stop by, try on hats, and take selfies in a photo booth. During the SXSW festival in Austin in March, Willie Nelson's Luck Ranch was the site of a daylong Americana music festival with a pop-up Stetson shop. The events, Kajimoto says, are key marketing opportunities for the company as it attempts to reach beyond its classic cowboy hats and attach the Stetson name to toppers that appeal to a broader and younger demographic. "We're a lot of things that seem to be eclipsed by our overwhelming identity as Western," Kajimoto says. "I don't want the urban contemporary, city, international guy to think, 'I have nothing in common with Stetson.'"

Kajimoto joined Stetson as CEO in 2012 after stints at Betsey Johnson, Marc Jacobs, Donna Karan, and Calvin Klein. But her experience at Ralph Lauren in the '80s and '90s, as a vice president with some responsibility over global licensing and broadening the appeal of the then-distinctly American brand, may prove the most useful as she cultivates hats as a fashion among hipsters.

Once a major U.S. manufacturer whose cowboy hats symbolized American frontier culture, Stetson more recently has struggled to survive. (The privately held company doesn't disclose its revenue.) New designs will be critical to drawing younger customers. "We have just as much credibility in dress hats as in cowboy hats," ▶

▶ The brand wants hipsters to embrace its toppers

▶ "I find American guys most self-conscious about a hat"



◀ Kajimoto says, noting that urban men wore Stetson's various styles in the early and mid-1900s. Nylon boonies and satin-lined trilbys with tattoo designs hang alongside the classics, including cowboy hats, in the company's showroom in New York's garment district, where Stetson is headquartered.

John Batterson Stetson started his business in 1865 in a small, rented space in Philadelphia. Ranchers and cattlemen considered his wares the highest-quality cowboy hats around, as much a necessity as boots and a saddle. A Stetson was also a status symbol among the ranchers, says Don Reeves, a curator and chair of cowboy culture at the National Cowboy & Western Heritage Museum in Oklahoma City. "If you had this

kind of hat, it said, 'I've made it,'" he says. By the early 1900s, Stetson ran the world's largest hat factory, making several men's and women's styles.

The company survived the Great Depression and both World Wars. It produced tens of thousands of hats during World War II under a contract with the U.S. Army. And it benefited from the popularity of Western-themed TV shows and movies of the 1940s and 1950s featuring stars like John Wayne and Roy Rogers. "There was a romance of the Old West that they could play up in advertising," says Sonya Abrego, a fashion historian at the Pratt Institute.

In 1947, sales of Stetson hats peaked at \$29 million (\$225 million in current dollars). The bustling factory employed more than 5,000 workers. Within a decade, as work in America moved away from the frontier and fields into the cities, sales began to decline. The business suffered as hats started to fall out of style among city dwellers. Stetson's sales plunged to about \$8 million in 1970, more than a 70 percent slide from the peak 23 years earlier. The Philadelphia factory closed in 1971. Stetson eventually donated the land to the city.

Without a factory, Stetson today is a licensing company. It contracts production to a number of manufacturers. RHE Hatco in Garland, Texas, annually makes almost half a million, including all of Stetson's classic cowboy hats. Stetson has only 10 employees. All of them, Kajimoto says, are brand evangelists.

"I find American guys most self-conscious about a hat," says Kajimoto. "What's most important is that he feels comfortable." Celebrity endorsers might help with that. Musicians Leonard

Cohen, Willie Nelson, and Brad Paisley, among others, aren't paid for the product plugs—they get free hats and agree to wear them in public, onstage, and at media appearances.

Stetson's hats are up against industry stalwarts such as Borsalino,

Biltmore Hats, and Kangol. Resistol, an 88-year-old brand currently owned by Hatco, is a cowboy hat rival.

Beyond the music festivals, the company is hosting launch parties in Los Angeles and New York for an upcoming hat designed in collaboration with artist and photographer Tasya van Ree, known for her black-and-white portraits of such celebrities as Michelle Rodriguez and Amber Heard. Kajimoto attends many of the events. Stetson is also making a big marketing push through designer collaborations and appeared at New York Fashion Week in February 2014. The brand has expanded its product line in recent years to include fragrances, home goods, apparel, boots, even branded bourbon.

The products draw heavily on Stetson's American frontier legacy, which it's promoting as cool. Every December, company reps travel to the National Finals Rodeo, a 10-day cowboy extravaganza in Las Vegas, to maintain what Kajimoto calls Stetson's "core Western culture." That piece of the business can't be taken for granted. "You always have to replenish and support all of your efforts," Kajimoto

says. "With the Western side, the challenge would be complacency."

Jaqui Lividini, founder and CEO of fashion branding consultancy Lividini, says Stetson's push to appeal to hipsters makes sense, especially given the company's heritage. "It's not like the cowboy hat they're known for isn't cool," she says. "It's a cool hat. It's just cool for a different audience."

—Kim Bhasin

The bottom line Stetson once had more than 5,000 workers and \$29 million in sales; today the company is a 10-person licensing operation.



Kajimoto

Entertainment

Eros Would Love to Become India's Netflix

▶ A Bollywood leader bets on a streaming service for smartphones

▶ "Getting people to subscribe on a monthly basis is a... cultural shift"

Movie-crazed Indians see Bollywood hits any way they can: crowding around family TVs, piling into dusty village cinemas and swank New Delhi multiplexes, borrowing bootlegged versions friends stash on mobile phone memory cards. They're just not in the habit of paying to watch online. Kishore Lulla plans to change that before Netflix does.

Nudged by an activist investor, the executive chairman of Bollywood film house **Eros International** is making its Eros Now streaming service a priority. He's shelving a plan to create a television channel so the company can focus on video-on-demand optimized for mobile devices and priced at rock-bottom rates. The idea is to use the Mumbai studio's catalog of more than 2,000 films, plus new exclusive series, to build a critical mass of streaming customers on the subcontinent before **Netflix** and **Amazon.com** do. "We thought, 'We have the market share, we have the movies,'" Lulla says. "Why don't we create our own platform?"

Thanks to a production machine built by his father, Arjan, who founded Eros in 1977, the studio releases about 70 movies a year. Eros is "exactly where Netflix wants to be in the next three to five years," Lulla says. "I'm already there."

Since its largely marketing-free soft introduction about a year ago, Eros

Now has attracted 26 million users. The service was introduced in July, fueled by a promise that many Eros movies will be available to stream on the service immediately after they reach theaters. Promotions tease coming digital series including *Khel*, a drama about “the twisted characters that populate the world of cricket,” and *Ponniyin Selvan*, based on a 2,000-plus-page novel about an ancient Tamil kingdom. A basic, ad-supported tier is free, and premium services with new movies, TV shows, and HD video cost 50 rupees (about 80¢) to 100 rupees monthly. Prices are higher outside India, where there’s opportunity in diaspora communities. In the U.S., Eros Now charges \$7.99—Netflix’s base cost.

Eros Now is counting on another difference to distinguish it from foreign rivals. Songs from Bollywood films, set to elaborate dance routines such as those in Eros’s new gangster comedy, **Welcome Back**, usually dominate India’s music charts, so Eros’s app has sections for listening to tracks and watching music videos. Macquarie Group estimates Eros Now could have 133 million users in 2020, though with likely fewer than 10 percent paying for premium subscriptions. Still, counting sales from in-app ads, it could book almost \$664 million in revenue in five years, more than double Eros’s total 2015 sales, Macquarie forecasts.

The company has experimented with various Web video concepts since 2005 but got a push this year from London-based **Knight Assets**, which has built a more than 2 percent stake. The firm, led by former Deutsche Bank trader Akshay Naheta and Mohsin Rashid, an ex-Bank of America investment banker, called for on-demand to be the core strategy.

Like Lulla, Knight has its eye on

Netflix, which has more than 65 million subscribers in 50-plus countries and plans to enter most others within a few years. Amazon’s going global, too, with

\$1.60

Cost of a monthly subscription to Eros Now in India

its Prime video streaming service. The two companies declined to comment. Building a service around the Eros library and production know-how could create “an impenetrable content and customer moat”

against the competition, Rashid says.

It will have to be a deep one: Netflix has said it will spend almost \$5 billion on content in 2016 and is aggressively expanding productions tailored to markets outside the U.S. There’s also homegrown competition. **Balaji Telefilms**, whose coming features include *Turbanator*, about a Sikh superhero, is planning both free and subscription platforms targeting millennials. Hooq, a collaboration of **Singapore Telecommunications**, **Warner Bros.**, and **Sony**, this year started its own service in India with monthly packages starting at 199 rupees.

None of them will have an easy time in a country where pay-TV providers struggle to sell low-cost bundles. Many Indians are schooled in downloading pirated films and swapping loaded memory cards to pop into their phones. Bought from kiosks for the equivalent of a few dollars, they’re one of the main ways lower-income Indians consume movies and music. “Getting people to subscribe on a monthly basis is a major cultural shift,” says Aswin Punathambekar, a communications

professor at the University of Michigan.

Ernst & Young ranks India second, behind China, as the most attractive emerging market in digital media, citing its smartphone penetration and youthful population—46 percent of its 1.3 billion people are younger than 25; Cisco estimates there will be 651 million smartphones in India by 2019. “Indian consumers pay for what they perceive value in and when it’s not available elsewhere,” says Sameer Nair, Balaji’s chief executive officer. “The best execution and the best storytelling will win.” —*Matthew Campbell and Bhuma Shrivastava*

The bottom line India’s Eros Now streaming service for phones, with 26 million users, is trying to expand before Netflix arrives.

Food

A Founder Who Wants To Stay in the Kitchen

- ▶ Chobani’s Ulukaya is looking for an operations chief but is staying put
- ▶ “Walking away from this is walking away from my life”

For months, speculation has swirled that Hamdi Ulukaya, the man responsible for hooking Americans on Greek yogurt, might be forced out as chief executive officer of **Chobani**, which since 2007 has mushroomed into a \$1.2 billion affront to food giants such as **General Mills** and **Dannon**. Last year, after presiding over production delays, canceled orders, and a product recall, the entrepreneur got \$750 million from private equity shop **TPG Capital** in exchange for preferred stock to ease a cash crunch. As part of the deal, Ulukaya was to explore bringing on a seasoned manager as CEO.

But with operations stabilizing and Chobani still growing faster than the overall yogurt market, Ulukaya now says he plans to stick around. “All that chatter out there, I look at it and I laugh and I smile,” says the founder, 44. “Nobody could think of Chobani without me and me without Chobani. Walking away from this is walking away from my life.”

Now that Chobani has grabbed about a quarter of the \$8 billion U.S. market for spoonable yogurt, Ulukaya speaks confidently of using new products, flavor innovations, and TV ads to double the



◀ Greek category—with his company benefiting most because it only sells the Greek variety. “I’m fortunate I’m doing business in a place where the competition is pretty lousy,” he says.

Greek yogurt sales have exploded in the U.S. since Chobani’s debut. In 2010, Greek sales were about \$550 million, or roughly 10 percent of the total market. Since then, sales have jumped about 500 percent as Greek yogurt’s captured nearly half the market; meanwhile, traditional yogurt sales have slumped about 22 percent, according to Nielsen.

Analysts are skeptical of Ulukaya’s growth forecasts, because total annual sales growth of Greek yogurt slowed from 114 percent in 2011 to 15 percent in 2014. And competition is now intense in the Greek category. “I think they’ll need another breakthrough concept beyond thicker, creamier, more protein,” says food consultant Michael Whiteman. “We’ve already gotten that message.”

In 2012, when Chobani’s sole plant in upstate New York was struggling to fill orders, it opened a second facility in Idaho, more than doubling capacity and gaining market access in Western states. But production delays arose, irritating big customers such as **Wal-Mart Stores**. And Chobani in 2013 had to recall mold-contaminated yogurt produced in Idaho that sickened dozens. Ulukaya acknowledges Chobani grew too quickly without putting in place sufficient infrastructure and management expertise; it’s since added industry veterans in areas such as quality control. “It was not sustainable,” he says. “This is not a technology company where you sit with 200 people in an office. This is a big operation—it’s not possible to be everywhere.”

With profits withering in 2013, Ulukaya sought the TPG loan. Kevin Burns, a TPG partner, became Chobani’s interim president and chief operating officer, helping to achieve \$76 million in annual cost savings. After it lost \$115 million in the second half of 2013, according to TPG documents reviewed by Bloomberg (Chobani says the number is inflated), results improved. Chobani says it’s posted positive earnings for 15 straight months.

Three of the Idaho production lines now churn out Flip, a container with two compartments—one filled with Greek yogurt, the other with something crunchy, like bits of dark chocolate or biscotti. The

idea is to make yogurt more indulgent, wooing more men and persuading women to eat Chobani beyond morning hours, when two-thirds of yogurt is consumed. Ulukaya expects to more than double Flip sales to \$250 million this year and to end 2015 with revenue of \$1.5 billion. He’s hired **Goldman Sachs** to study selling a minority stake to a larger food company with an established distribution network, as **Keurig Green Mountain** has done with **Coca-Cola**. “It will enable the company to compete more aggressively on a national scale,” says IbisWorld analyst Andrew Alvarez.

Ulukaya also says he’s looking for an executive to put in charge of operations, while retaining the CEO job for himself. TPG says it’s OK with that. “We are pleased with the progress that Chobani has made and the future prospects under Hamdi’s leadership,” it said in a statement, “and look forward to being a long-term investor in the company.” —*Craig Giammona, with Kiel Porter*

The bottom line Sales growth for Greek yogurt has fallen from 114 percent in 2011 to 15 percent last year.

Energy

Solar Suffers From Gas Pains in Israel

▶ Discovery of offshore fields has slowed the shift to greener power

▶ “We think they’ll turn their focus to renewables again”

After struggling to grow citrus trees on a stretch of parched desert, Israel’s Kibbutz Ketura instead devoted the land to harvesting the country’s most abundant resource: sunshine. Yet as the kibbutzniks seek to expand their solar installations, Israel’s government is proving almost as formidable an obstacle as the scorched soil was to the fruit trees. “Israel has the technology and plenty of sunshine, but the government is completely ignoring the renewables industry,” says Yosef Abramowitz, a solar energy advocate who helped found **Arava Power**, the Ketura field developer.

With more than 300 days of sunshine a year and a red-hot tech

Arava Valley installation

Share of Israel’s electricity that comes from renewable sources

20%

sector, Israel could be a leader in solar, but it’s lagged behind places like cloudy Germany and the rainy Netherlands. That’s because in recent years, geologists have discovered huge gas fields just off Israel’s coast. The country’s coal-fired plants soon started burning cheaper and cleaner gas—and the government shifted its focus away from renewables. Israel says it gets less than 2 percent of its electricity from renewable sources, vs. 22 percent in the European Union, 8 percent in China, and 7 percent in the U.S., according to the International Energy Agency. The country’s solar industry peaked at about 130 companies in 2010 as investors piled in, but today there are only 60, according to the Green Energy Association of Israel. The decline stands in contrast to Israel’s history of coping with meager resources such as a dearth of water, which gave rise to drip irrigation and desalination technologies now used worldwide.

Gas has dominated Israel’s energy agenda since the discovery in 2009 of a field called Tamar, and recent governments have delayed approval of new solar installations. While permits for 818 megawatts of solar capacity were issued from 2009 through 2011, since then no new licenses have been handed out for facilities that connect to the national grid, according to the Green Energy Association. Developers have applied for permits for about 2 gigawatts of solar projects in recent years, the group says. “You go to the energy ministry these days and try to speak to them about solar, and they’ll say, ‘Don’t talk to

“This is not a technology company where you sit with 200 people in an office. This is a big operation—it’s not possible to be everywhere.” —Hamdi Ulukaya

me about renewables, we've got gas,'" says Eitan Parnass, head of the green energy trade group.

Yuval Zohar, who oversees renewables at the energy ministry, says Israel may soon issue permits for 340Mw of solar installations that got preliminary approval last year before they were delayed after the government collapsed in December. Zohar insists Israel is on track to achieve its target of 10 percent renewable energy by 2020, but Amit Mor, chief executive officer of Eco Energy, a consulting firm near Tel Aviv, says it will be lucky to get to half that level. Electricity prices have dropped 10 percent due to the shift to gas, he says, and if they keep falling, "the economic viability of solar is going to be marginal."

Solar executives predict that with the government wrapping up legislation establishing rules for the gas industry and setting a policy for exports, officials will soon put solar back on the agenda. "Regulators and politicians understand the need for renewables," says Yaron Szilas, who heads the energy business of **Shikun & Binui**, Israel's largest construction company, which in July secured financing for a \$1 billion, 110Mw solar-thermal plant in the Negev desert. As the gas industry matures, "we think they'll turn their focus to renewables again."

The Negev is a sparsely populated expanse of sand, scrub, and rock sprinkled with army bases and impoverished Bedouin villages. At its southernmost tip, where Israel narrows to a sliver between Jordan and Egypt, a few kibbutzim have invested in solar. In 2006, Abramowitz and his wife, Rabbi Susan Silverman (sister of comedian Sarah Silverman), were spending a sabbatical at Ketura. Surprised that the kibbutz got none of its energy from the sun, Abramowitz sought money from U.S. investors to form Arava, which finished Israel's first solar field in 2011. Since then, Arava has built more than 100Mw of capacity, but it's awaiting approval on another 200Mw. Without new licenses, "we have ground to a halt," says CEO Jon Cohen. "The industry is stuck waiting."

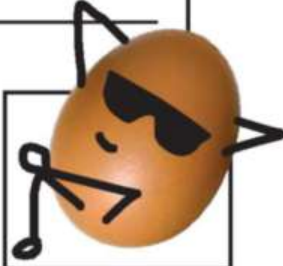
—David Wainer and Anna Hirtenstein

The bottom line Israel's gas market may turn the country into an energy exporter, but its once-vibrant solar industry has dimmed.

Briefs

Turbulence at United

By Ira Boudway



McDonald's wants to let hens roam. The company says it plans to transition to using cage-free eggs at its 16,000 restaurants in the U.S. and Canada over the next 10 years.

✈️ **United Airlines** Chief Executive Officer Jeff Smisek and two senior executives resigned amid a federal corruption probe into whether the carrier created a money-losing flight from Newark, N.J., to Columbia, S.C., in 2012 to benefit David Samson, then-chairman of the Port Authority of New York and New Jersey, who owned a vacation home near Columbia. Investigators are considering whether the so-called chairman's flight served as a bargaining chip in United's push for improvements to Newark's airport.

Average number of viewers of the debut of CBS's *The Late Show With Stephen Colbert* on Sept. 8. It was more than double the viewership for either Jimmy Fallon or Jimmy Kimmel, Colbert's late-night rivals

6.6m

The airline is cooperating with authorities. 📺 **Yahoo!** failed to get advance approval from the Internal Revenue Service for a tax-free spinoff of its \$23 billion stake in Chinese e-commerce

giant **Alibaba**. Yahoo withdrew its petition for a ruling ahead of the planned sale after the IRS said it would not grant the request. The company says it may proceed with the sale and believes it can meet the requirements for tax-free treatment. 🚚 A pair of tech heavyweights are pushing into the food delivery business. **Google** says it will start testing grocery delivery service in two U.S. cities later this year, while **Amazon.com** is now offering restaurant delivery to Prime subscribers in Seattle.

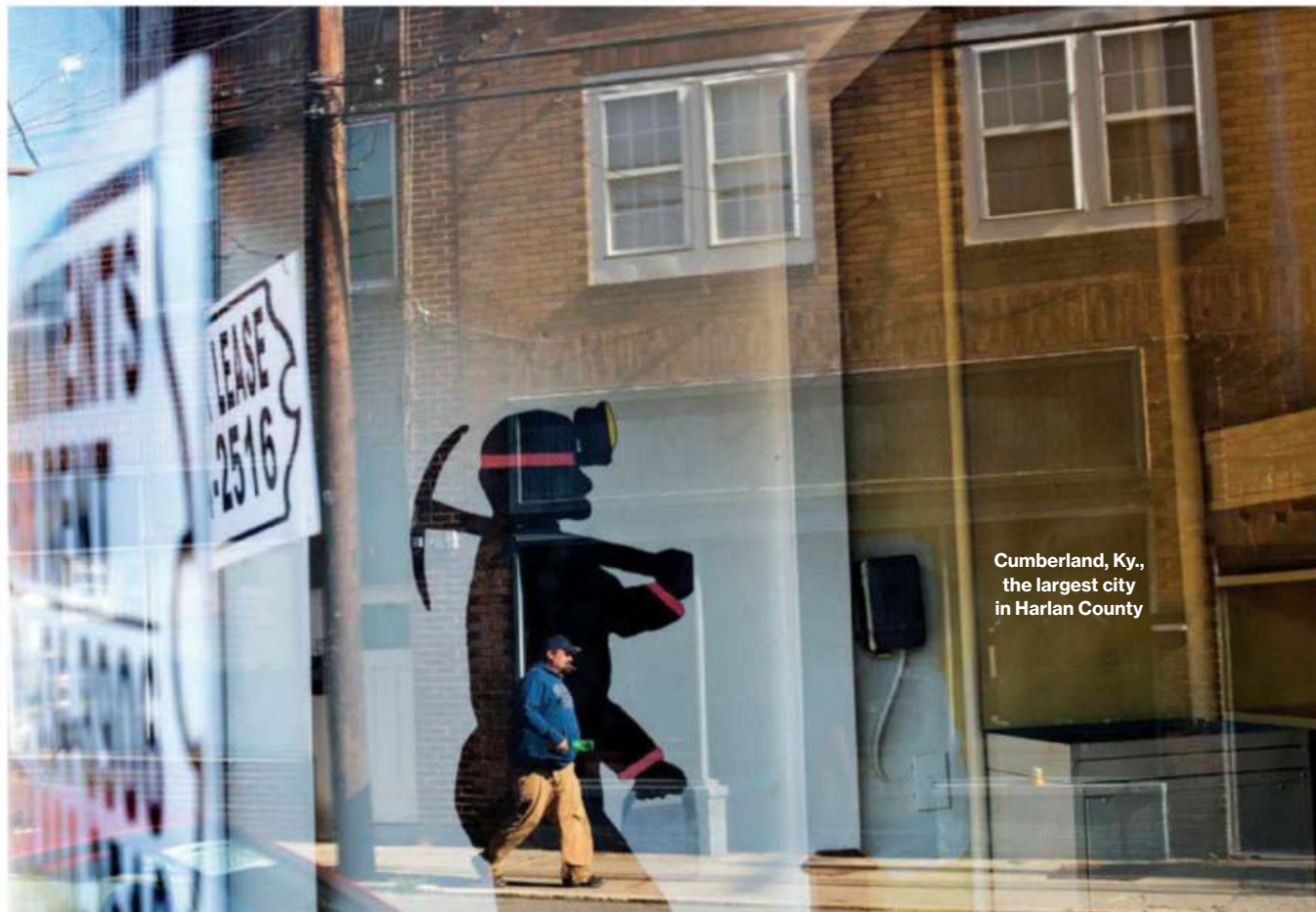
👕 With losses mounting as the surf fashion trend fades, California clothing chain **Quiksilver** filed for bankruptcy. Under a reorganization proposal, the chain would hand control to its lenders at private equity firm **Oaktree Capital Management**. 👜 Retailer **H&M** is raising wages at 68 factories in China, Cambodia, and Bangladesh. The Swedish company's "fair wage method," which also allows for union representation, follows a 2014 strike by garment workers in Cambodia.

CEO Wisdom



"I felt that the future wasn't going to be as good as people were thinking it was going to be."

Berkshire Hathaway CEO **Warren Buffett** on crude oil prices and the decision to sell shares in ExxonMobil



Cumberland, Ky.,
the largest city
in Harlan County

Tax Dollars Follow Coal Out of Appalachia

► Mine closures leave towns struggling to keep public services running

► “You see downturns, but not like this. I keep telling people, ‘It’s not coming back’”

In Kentucky’s Letcher County, emergency response time for sheriff’s deputies averages an hour, up from 30 minutes a year ago. Martin County, also in eastern Kentucky, couldn’t afford to open its public swimming pool this summer. West Virginia’s Boone County, once the richest in the state, is considering ending free garbage pickup. The cutbacks stem from a steep drop in coal production as tougher environmental regulations and low natural gas

prices make coal less competitive. “It’s just been devastating to us,” says Kelly Callahan, judge-executive of Martin County, which has a \$7 million budget, down \$1.5 million from three years ago. “You take a million and a half out of a budget that size, it’s a disaster.”

The Appalachian Regional Commission, a federal-state economic development organization, classifies 93 of 420 counties as distressed. Many of them are in central Appalachia,

which straddles Kentucky, Tennessee, Virginia, and West Virginia. The region has been mined for two centuries, and the cheapest and best coal has been dug up. The remaining seams are lower quality and more expensive to mine. Many utilities have replaced Appalachian coal with cheaper fuel from Illinois and the Powder River basin in Wyoming and Montana, or switched to burning natural gas. Coal’s share of electricity generation in the

U.S. will fall to 35 percent this year, from 50 percent a decade ago, according to the U.S. Energy Information Administration. Coal production is expected to fall to less than 914 million tons, the lowest in 29 years. The number of active pits in the U.S. has plunged 39 percent from the end of 2005 through June 2015.

Most of Appalachian counties' lost revenue comes from a drop in payments known as severance taxes, which mining companies pay into state coffers based on the value of coal tonnage taken from the earth. West Virginia's Boone County got about \$2 million this year, down from almost \$6 million in 2011, says Commissioner Mickey Brown. In Kentucky, severance money paid to counties totaled \$23.4 million in 2015, compared with \$62 million five years ago. Letcher County's quarterly severance checks dropped to \$200,000, from about \$700,000 two years ago. The sheriff's office had to lay off employees so it could make its pension payments. "You take all of that money out of our budgets, and what do you expect us to do?" asks Jim Ward, the county's top official.

Neighboring Knott County gets less than \$600,000 a year from severance taxes, compared with as much as \$1.6 million a decade ago. County Treasurer Kevin Jacobs says he's told elected officials to plan for no severance dollars at all. "You see downturns, but not like this," he says. "I keep telling people, 'It's not coming back.'"

Mine closings, layoffs, and bankruptcies have swept the region. In August, **Alpha Natural Resources** of Bristol, Va., filed for Chapter 11 protection, following **Patriot Coal** of Scott Depot, W.Va., which entered its second bankruptcy in May. In eastern Kentucky, coal jobs fell to 7,153 at the end of 2014, from 14,412 in 2008, according to a state report. Production there has fallen to 37 million tons from 91 million.

The Boone County school district received about \$5 million less in coal-related tax revenue for this school year than last year, or about 10 percent of its budget, says Deputy Superintendent Jeff Huffman. Whitesburg, Ky., has lost almost half its business tax revenue, says Mayor James Craft. In late August and early September, a gun store, a framing

shop, and a uniform supplier closed.

The West Virginia Center on Budget & Policy in Charleston, a liberal non-profit, has long advocated for the creation of a state trust fund for the days when coal revenue would dwindle. "If you don't put that money away into a permanent trust fund, then not only will the jobs and wages disappear, but so will the state and local revenue," says Ted Boettner, the organization's executive director. "That's what's happening now."

The Obama administration has proposed a package of grants, tax breaks, and money transfers worth several billion dollars in its 2016 budget to help ailing coal communities in Appalachia. The White House offer has met resistance in Congress, with Kentucky Republicans Mitch McConnell, the Senate majority leader, and Hal Rogers, chairman of the House Appropriations Committee, calling for a rollback of environmental rules along with direct federal assistance. "Any plan from the White House aimed at improving the quality of life for the people of coal country is not serious or credible without a legitimate proposal to revisit these wrongheaded, job-killing regulations," says Rogers' spokeswoman, Danielle Smoot.

Almost a dozen Appalachian towns and counties have passed resolutions urging Republicans in Congress to support the White House plan. "I want to mine coal, but we've got to look at other ways to put people to work, so they can provide for their families," says Dan Mosley, the judge-executive of Harlan County, Ky., a Democrat. His Republican counterparts are also in

favor. "If you've ever been really hungry in your life, you'd eat at any restaurant you can find," says Republican Albey Brock, the top official of Bell County, Ky. "The federal government has caused our problems, and they're going to have to help us solve it." —Margaret Newkirk, Tim Loh, and Mario Parker

The bottom line The steep drop in U.S. coal production has created a budget crisis for towns and counties in Appalachia.

Health Care

A Push to Regulate Alternative Medicines

► The FTC moves to block claims by makers of homeopathic remedies

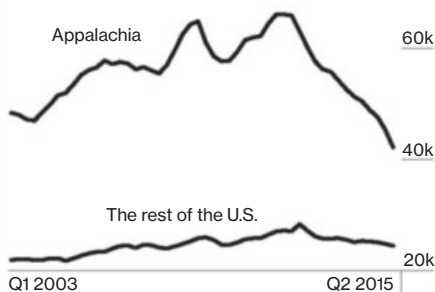
► "I was sold sugar tablets in a tiny cardboard box"

Federal agencies don't normally tell each other how to do their jobs. But the Federal Trade Commission is breaking with tradition: In August, its five commissioners unanimously agreed to ask the U.S. Food and Drug Administration to change the way it regulates homeopathic products. The FTC said it's "concerned" that the FDA's hands-off approach to homeopathic remedies might conflict with federal requirements that claims made in medical advertising must be supported by evidence.

Homeopathy is a \$3 billion industry in the U.S. It's based on an idea that illnesses can be treated by taking diluted doses of substances that cause similar symptoms. Remedies are usually derived from plants, minerals, or animals—crushed bees, for example—and formulated as tablets, gels, creams, or drops to treat passing conditions such as colds or muscle aches. The National Institutes of Health says "key concepts of homeopathy are inconsistent with fundamental concepts of chemistry and physics."

In 1972, the FDA began reviewing the safety and efficacy of nonprescription medications that had long been available over the counter like acetaminophen and ibuprofen. But there were so many that the agency never got around to evaluating homeopathic products. Since ►

Number of Coal Miners



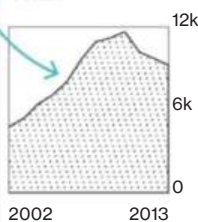
DATA: COMPILED BY BLOOMBERG

◀ 1988, companies have been allowed to sell treatments for minor ailments that go away on their own without having to prove they work, though the agency does monitor manufacturing practices to ensure products aren't contaminated. In April, the FDA held a hearing on potential regulations for homeopathic remedies, prompting the FTC letter encouraging it to adopt safety standards.

Poison control calls about homeopathic remedies

The FTC has records of 141 consumer complaints that mention homeopathy since 2007, according to files obtained by Bloomberg through a public records request. They

Cures Worse Than the Disease



describe a variety of rip-off tactics. An 80-year-old woman targeted by telemarketers paid \$469 for an oral weight-loss spray purporting to contain human growth hormone and sold as homeopathic. One person reported spending

\$100 on teething tablets from chain drugstores that claimed on the package to relieve "simple restlessness and wakeful irritability" in babies. The consumer investigated and found that the products were so diluted that no active ingredient remained. "I was sold sugar tablets in a tiny cardboard box and told that I was buying a medicinal product that would relieve certain symptoms," the person wrote to the FTC. "How is this legal? Seriously?"

In focus groups, the FTC found that "once consumers were given basic information about homeopathy, they were more skeptical of the homeopathic treatment than when they incorrectly believed that homeopathy was simply a synonym for 'natural.'" Part of the problem is that the FDA's policy requires such drugs to display an indication for use, "even when the product has not been demonstrated to be efficacious for that indication," the FTC wrote in its letter to the FDA. That conflicts with FTC rules "that health claims be substantiated by competent and reliable scientific evidence." Manufacturers say the system is fine. "We believe that the current regulatory structure is adequate," says Alissa Gould, a spokeswoman for homeopathic medicine manufacturer **Boiron**, who spoke on behalf of the American Association of Homeopathic Pharmacists. "We welcome a

balanced conversation with the FTC."

Since 2009, the FDA has sent almost 40 warning notices to homeopathic manufacturers in cases involving contamination or where manufacturers claimed their products could cure serious diseases. The agency has overseen three recalls. One was for a zinc cold remedy that caused people to lose their sense of smell, and another was for teething tablets with toxic levels of the plant belladonna. The third involved products whose labels didn't indicate they contained penicillin, which can harm people who are allergic. The FDA is still examining "whether to adjust the current enforcement policies to reflect the dramatic increase in the homeopathic product marketplace over the last 25 years," says spokesman Christopher Kelly. "We will continue to gather public comment to help inform the agency on the adequacy and clarity of the current enforcement policies." —*John Tozzi*

The bottom line The FTC wants the FDA to get tough on false claims by makers of homeopathic remedies.

Taxes

Setting a Trap for Offshore Tax Cheats



► The FBI targets middlemen who incorporate tax shelters

► "Leads have been pouring into the government"

Michael Dodd, a manager for a Panamanian company that helps people set up shell corporations overseas, thought he was meeting a wealthy client when he arrived for lunch at Manhattan's Gramercy Tavern in July. He was wrong. The "client," who supposedly wanted to shelter money made from a penny stock scam, was an undercover FBI agent, and Dodd was arrested at the restaurant. Two of Dodd's partners were arrested at Long Island's

MacArthur Airport after accepting \$2.2 million in cash packed into Louis Vuitton duffel bags—a measure they thought guaranteed they weren't being set up. "Cops can't get the authority to buy a Louis Vuitton bag. It's too expensive," one of the men told agents, according to the criminal complaint.

All three have been denied bail and are being held on money laundering charges. None have yet entered formal pleas. A lawyer for Dodd didn't respond to a request for comment; a lawyer for one of the other defendants didn't respond, and the other declined to comment. Representatives of Dodd's employer, Panama City-based **High Secured**, didn't respond to calls or e-mails seeking comment. The company, which provides offshore Web hosting and advertises help "setting up complete corporate structures and merchant accounts to individuals and businesses to conduct their financial affairs in a private, secure, reliable, and tax-free environment" on its website, wasn't named as a defendant.

The case was part of an effort by the U.S. Department of Justice to target incorporators, people who specialize in establishing offshore shell companies in countries with strong corporate secrecy laws and weak extradition arrangements. It's part of a broader campaign against tax evasion made possible by an IRS amnesty program that requires participants to snitch on the middlemen who helped them move assets overseas, a group that also includes some Swiss bankers and other financial advisers. More than 50,000 U.S. taxpayers have avoided charges since 2009 under the amnesty, generating a rich pool of information for prosecutors. "Leads have been pouring into the government with respect to offshore constructs that are available to help people do money laundering, and securities fraud and tax evasion, and all kinds of misdeeds," says Miriam Fisher, a former adviser to the assistant attorney general for the Justice Department's tax division and global chair of Latham & Watkins's tax controversy practice.

The goal for investigators is to lure suspects back to the U.S. using elaborate undercover operations. That helps avoid lengthy extradition battles, which have stymied prosecutors in tax evasion cases involving Swiss bankers, says Jeffrey Neiman, a former federal prosecutor who worked on a 2009 tax evasion case against **UBS** that led to a rollback

in Swiss banking secrecy laws. About 30 Swiss advisers have been indicted in the U.S. since 2008, but at least 21 are still at large, including Josef Beck, who was indicted in 2012 for allegedly conspiring with UBS bankers to help Americans evade taxes.

U.S. officials last year brought charges against Robert Bandfield, founder of Belize-based **IPC Corporate Services**, employee Andrew Godfrey, and several others at brokerages and other firms. Prosecutors accused them of helping clients, including as many as 100 Americans, launder about \$500 million made from illegal stock trades. An undercover investigator, posing as a corrupt stock promoter, paid \$9,600 for help setting up a corporate structure designed for illegal trading and money laundering, prosecutors said in court papers. Bandfield and Godfrey allegedly told the agent they'd be able to return laundered funds on prepaid debit cards in \$50,000 installments. Bandfield was arrested in September 2014 at the Miami airport on his way to Belize. He's pleaded not guilty to federal charges, and his case is pending; his lawyer declined to comment. Godfrey, representatives for IPC, and all but two of the others charged haven't appeared in court and couldn't be located for comment.

Patrick Poulin, an attorney, flew to Miami from the Turks and Caicos Islands last year to meet with two Americans who had asked him to help shelter \$2 million. Instead, they arrested him at the airport. The clients were really federal agents. Poulin eventually pleaded guilty to conspiracy and spent a year in prison. "My lawyer told me I should have known" that the supposed clients were undercover law enforcement, says Poulin, who is Canadian and lives in Quebec. He started out in incorporation work handling real estate deals for "people coming down on vacation, people wanting to buy a condo," he says. For the agents posing as clients, he set up an entity called "Zero Exposure Inc.," according to court documents. "The line between unhappy creditor and fraud, it's not super easy to define," Poulin says. —Christie Smythe

The bottom line An IRS program requiring tax evaders to snitch on offshore incorporation agents has led to a wave of arrests.

"What bothers me, and of course bothers Dr. Carson, is that our children and grandchildren are being put under such burdensome debt"

Candidate Whisperer



Thomas Rustici

Economic adviser to Republican presidential candidate Ben Carson

► Thomas Rustici uses vivid adjectives to describe recent U.S. economic policymaking: corrupt, wasteful, bloated, dangerous. "I don't trust Congress," he says. "I don't trust their ability to manage things." An assistant professor of economics at George Mason University, a center of libertarian thought, Rustici is crafting a policy platform for retired neurosurgeon Ben Carson. ► In August at the first Republican debate, Carson said he'd institute a flat tax based on tithing. "I think God is a pretty fair guy," he declared. Carson has suggested a range of 10 percent to 15 percent, but Rustici hasn't figured out yet whether to structure the system as an income tax or a consumption tax, or which deductions to keep. "I'm trying to sort through all this and make time for my students," he says. ► According to the Tax Policy Center, a nonpartisan think tank, the average federal tax rate for households making more than \$1 million is 34.1 percent, more than twice Carson's proposed rate. The average for households making \$30,000 to \$40,000 is 8.4 percent. Rustici, who was a small-business owner in Kansas City, Mo., before joining academia, says those figures obscure the advantages the wealthy have when it comes to finding loopholes: "The people who have profited from gaming the tax code are not poor people." —Richard Rubin

Curriculum vitae

2005-Present

Assistant professor of economics, George Mason University

2001-10

Freedom professor of economics, Fund for American Studies

1997-2005

Instructor, George Mason

Education

Ph.D., public policy, George Mason, 2005
M.A., economics, George Mason, 1987
B.S., economics, George Mason, 1985

Developing a WWJD tax policy



Edited by Allison Hoffman
Bloomberg.com

EVEN PARENTS NEED TO STAY OUT OF TROUBLE.

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September 14 — September 20, 2015

Just a Fantasy



► Daily sports sites such as DraftKings and FanDuel have become the province of pros

► “By definition, the average player is going to lose money”

As football season begins each September, new players flock to daily fantasy sports sites—online hybrids of rotisserie leagues and old-fashioned betting parlors—with the kind of naive optimism usually reserved for fans of the Cleveland Browns or New York Jets. If you fill a fantasy lineup with the players who perform well on a given weekend, an entry fee of \$20 can win you \$1 million or more on either of the two leading sites, **DraftKings** and

FanDuel. (Federal law classifies daily fantasy as a game of skill, exempting it from restrictions on sports betting.)

In the first week of the **National Football League** season, players on these two sites alone will spend a combined \$60 million on entry fees, estimates Adam Krejci, a partner at market analyst Eilers Research. By comparison, sports bookies in Las Vegas are expected to handle about \$30 million. But just like Browns and Jets fans, most daily fantasy

bettors will end up disappointed by season's end. They can't quite compete with sharks like Saahil Sud.

Sud, who plays online under the name maxdalury, is daily fantasy's apex predator, according to **RotoGrinders**, a stats site for players. The 27-year-old says he's made more than \$2 million so far this year. From his two-bedroom apartment in downtown Boston, Sud, a data scientist and former software consultant, spends 8 to 10 hours a

◀ day scraping data from various public sources online, creating predictive models, and using software he's built to generate lineups. He says he submits about 200 entries nightly during baseball season and more than 1,000 a week when the NFL plays. He risks an average of \$140,000 a day and averages 8 percent in profit a night. He wins and loses thousands with every touchdown, field goal, and interception.

A rookie player submitting one entry per contest will have a tough time competing with Sud and other savants. During the first half of the current baseball season, only the best 1.3 percent of players won money, according to analysis of one unnamed daily fantasy site published in July by *Sports Business Journal*. Daily fantasy players can improve their chances by submitting multiple entries. The top 100 players on FanDuel and DraftKings win, on average, 330 times every day they play, according to a RotoGrinders analysis conducted for *Bloomberg Businessweek*. The top 10 players win 873 daily plays.

Both FanDuel and DraftKings say that they expect to pay out about \$1 billion each in winnings this year, that the *Sports Business Journal* analysis doesn't fully reflect the competition on their sites, and that baseball disproportionately favors sharks. DraftKings Chief Executive Officer Jason Robins estimates that the "sharky" players make up less than one-tenth of 1 percent of the site's users. Neither company would provide numbers of average daily players, though DraftKings estimated its weekly audience in the hundreds of thousands in August 2014.

To make things more comfortable for people who don't treat daily fantasy like a full-time job, the sites have begun offering the online equivalent of beginners' tables at casinos. "What we have tried to do," Robins says, "is to create places where people can really make sure that they are playing against players of similar skill."

"Some players, who lose consistently, leave. But some of them get better."
—Jason Robins

Both DraftKings and FanDuel have also begun limiting the number of wagers a player can submit for major tournaments in which the prizes regularly top \$1 million. The bets are generally limited to somewhere in the triple digits, which sounds like a lot, but it's a restraint on such players as Sud. This summer, both sites began requiring players to get permission to run automated scripts. (Sud says he got approved.) The sites banned custom software like FanDuel Fish Finder, which helps sharks seek out opponents with slim or poor records to challenge in head-to-head matches.

Justin Van Zuiden, 31, who has collected more than 14,000 wins with FanDuel alone, often plays in head-to-heads. He'll only take on one match per night against someone with just a few wins to his name, he says: "That's kind of a common courtesy." The Sterling (Ill.) resident, who plays under the name STLCardinals84, invests about \$5,000 to back about 50 entries on an average night during the baseball and basketball seasons. On an NFL Sunday, he'll raise his stake as high as \$8,000. Over the last three years, he says, he's made "high five figures, low six figures" per year from his hobby, which is more than he earns as a CPA.

Three-year-old DraftKings and six-year-old FanDuel are each valued at more than \$1 billion following new rounds of investment from the likes of **Major League Baseball, the National Hockey League, NBC Sports, Fox Sports, Madison Square Garden, Google, and Comcast** in July. DraftKings raised \$300 million, bringing its total investment to date to \$426 million; FanDuel raised \$275 million, upping its total to \$363 million.

To keep growing, the sites need to continuously attract more people, and the pull of ever-larger prize pools will be limited if people don't think they can win. To nudge daily fantasy further into the mainstream, DraftKings in particular is funneling investor cash into a wave of ads. The company was the largest buyer of TV ads in the first week of September, spending \$23.6 million, according to researcher iSpot.tv. A typical spot promises a shot at "life-changing piles of money."

Although money is the sales pitch, as with lotteries and slot machines, it's not clear that the return on investment

matters to most players, says FanDuel CEO Nigel Eccles. "By definition, the average player is going to lose money," he says. "Whether they win or lose, the feedback is that they love the experience." And a few of the fish will grow into sharks, says DraftKings CEO Robins. "Some players, who lose consistently, leave," he says. "But some of them get better."

Even Sud says it's only in the last year that he's become confident enough in his skills to play daily fantasy full time. Once he sets his rosters each day, he says, he watches the games and tries not to agonize over individual plays like a die-hard fan in a sports bar. "You can't follow along every play every time," he says. "When you're doing this full time, it would drive you insane."

—Joshua Brustein and Ira Boudway

The bottom line FanDuel and DraftKings will take in \$60 million in bets in the NFL season's first week, but the big winners will likely be few.

Spaceflight

Elon Musk May Not Make The Best Neighbor

▶ Residents near a SpaceX launch site face curfews and evacuations

▶ "I'm not sure I'd be comfortable living that close"

Boca Chica Village, a community of about three dozen houses filled with blue-collar workers and retirees, sits on a dusty fleck of South Texas among windswept dunes, emerald marshes, and a desolate white beach. Last year, when Elon Musk's **SpaceX** chose the beach as the country's first commercial rocket launch site, many of the folks who live there thought the idea was kind of cool. They've changed their minds.

The residents say SpaceX told them in the spring that to continue going about their daily lives, they would have to register with the Cameron County government for ID badges to be worn when stopped at checkpoints operated by law enforcement leading into the village. Also, for 15 hours surrounding a launch, the public beach will be closed and travel restricted. If residents happen to be picking up groceries past a designated "point of no return," forget about going home.

\$575m

The combined investment DraftKings and FanDuel announced in July

Boca Chica Village



Names of local streets
(there aren't many)
have been changed



Weems Street is the
sleepy heart of town.
Residents are worried
about getting
pushed out

SpaceX says takeoffs may start as soon as next year and occur about once a month. It has proposed blanketing the beach with video cameras and drones to enforce the safety rules, which could still change.

"I'm like, 'Are you out of your mind?'" says Cheryl Stevens, a community activist who bought a home in Boca Chica a decade ago. "It's like Nazi Germany." She and other residents are talking about acts of civil disobedience, or maybe a lawsuit. Musk's company has said the restrictions are needed to ensure no one wanders into harm's way. SpaceX declined to comment.

Boca Chica dates to the 1960s, when a Chicago real estate developer built much of the town, which attracts mostly seasonal residents. Texas officials drew SpaceX to the impoverished area last year with about \$15 million worth of state economic incentives and \$5 million from a local economic development agency. Last September, shovel in hand, Musk stood on the beach with former Texas governor Rick Perry for a groundbreaking ceremony.

Residents say they began to have some concerns as SpaceX snapped up more land and local streets were renamed Rocket Road and Mars Crossing. They grew less comfortable as the company won approvals to build on environmentally sensitive wetlands and tacked up security cameras at a house on Weems Street, the crumbling two-lane road at the heart of the village. "When we first moved here, I just felt closer to the Lord," says Bonnie Heaton, a retired hairdresser. "Well, that peace has kind of gone out the window." She worries that one day SpaceX will use eminent domain laws to claim her Weems Street home.

Stevens says she's consulted with

attorneys about the legality of closing down the public beach, which she argues is protected from commercial development by an open beaches law enshrined in the state constitution.

J. David Breemer, a public interest attorney with expertise in coastal land rights, says Texas law puts the onus of proving public access rights on the citizens. Stevens says she's also thinking about other ways to register her opposition, such as a sit-in on the beach during launch day. County Commissioner Sofia Benavides says SpaceX has her full support and local officials will do everything in their power to keep people safe.

Even some of Boca Chica's early SpaceX boosters have turned on the company. Frank Kawalski, who moved there from Key West, Fla., a decade ago, says he unfurled a giant "Welcome SpaceX" sign on his house when he heard the company was coming to town. That was before anybody mentioned checkpoints or possible evacuations. "I've never left my house for hurricanes or anything," says Kawalski, who owns three homes in the village and occupies one with his son, four dogs, seven cats, 12 macaws, and a pet rattlesnake named Low Rider.

Space enthusiasts say they're looking at Boca Chica real estate as a way to get a close look at SpaceX's flights. On a message board called NASASpaceFlight.com, a person going by the name Nomadd claimed to have made an offer on a home listed at \$55,000, writing, "Anybody know how to build an elevated, air-conditioned observation deck with a tiki bar?"

Residents could be exposed to dangerous chemicals or falling debris, says David Kanipe, a professor at Texas A&M University and a retired NASA engineer.

For shuttle launches at Cape Canaveral, viewers typically had to stay at least three miles away, he says.

In June, an unmanned SpaceX rocket burst into flames minutes after it launched from Cape Canaveral. In the following days, beachgoers were warned to stay away from any rocket debris that washed ashore, due to its toxicity. Boca Chica is less than two miles from the launch site. "I'm not sure I'd be comfortable living that close," Kanipe says. —Lauren Etter

The bottom line SpaceX got \$20 million in incentives to set up shop in Boca Chica, but residents aren't happy with the proposed rules.

Hardware

The Fight to Fix Your iPhone (and Other Stuff)

- ▶ Shop owners and consumer advocates want a "right to repair"
- ▶ "The problem isn't current law, but lack of law"

A few decades ago, you could take your newest piece of technology, be it a TV or tractor, to the repair shop of your choice, or try to fix it yourself. That's usually no longer the case, as hardware increasingly comes loaded with copyrighted software. To varying degrees, many of the world's biggest electronics manufacturers limit access to the information and equipment necessary for do-it-yourself maintenance and repairs.

Apple doesn't publish repair manuals or sell parts to customers, and its warranty doesn't apply if unauthorized repair damages its device. **Samsung** ▶

◀ wouldn't say why it doesn't share repair information, though it makes some parts available to shops. Even **John Deere** gives only approved technicians access to the embedded software that controls systems in its machines. The manufacturers argue these limitations keep products working safely, and that copyright law lets them protect their intellectual property so it isn't pirated.

"Bulls--t," says Gay Gordon-Byrne, executive director of the Digital Right to Repair Coalition, based in North Haledon, N.J. "Repair is a profit center for a lot of companies, and sometimes it is more profitable than selling hardware." Maintaining "repair monopolies," she says, pushes up costs and makes customers more likely to simply junk old models for new ones. Apple charges \$79 to replace an iPhone 4 battery. Repair website **iFixit** charges \$20 for a battery and DIY kit for the same job.

Gordon-Byrne's organization and advocates such as the Electronic Frontier Foundation are supporting bills introduced this year in Massachusetts, Minnesota, and New York that would require manufacturers to sell parts and

\$20

iFixit's price for an iPhone 4 battery and DIY kit, one-fourth what Apple charges to replace one

provide manuals to hardware owners and independent repair shops. Separate efforts in Congress would amend the federal Digital Millennium Copyright Act by giving explicit permission for consumers to circumvent a manufacturer's digital lock on its software for a lawful reason such as repair. "The problem isn't current law, but lack of law," says Gordon-Byrne. Until consumer rights are clearly legislated, "Manufacturers have carte blanche to limit anything they wish."

Massachusetts' bill is due for a hearing on Sept. 22, and the Minnesota bill's sponsors are meeting in October to discuss similar legal language with the state environmental agency. New York's version was considered by the state senate's rules committee but wasn't brought for a vote before the legislative session ended in June, so it's on hold at least until lawmakers reconvene in January.

"This needs to happen," says Minnesota state senator David Osmek, a co-sponsor of that state's bill. Hardware makers "can be part of the solution or not have a seat at the policy

table." Industry groups, including the Consumer Electronics Association, NetChoice, and the State Privacy and Security Coalition, oppose right-to-repair laws. "Imagine the danger created if someone who lacks proper training makes repairs to these devices," says Carl Szabo, policy counsel at NetChoice.

Kyle Wiens, who co-founded the Digital Right to Repair Coalition in 2013, is chief executive officer of iFixit, the website that posts free repair instructions and sells parts for everything from smartphones to power tools to cars. He and Gordon-Byrne say they expect the repair bills to move slowly. In 2014 major carmakers signed an agreement to make diagnostic tools and service information available to independent repair shops and vehicle owners, but only after a decade-long fight culminated in Massachusetts' passage of an automotive right-to-repair law.

There are signs, though, that the coalition's state-level fights are accelerating. Gordon-Byrne says groups in Oregon and Virginia have asked for help with similar efforts. The idea that big companies can limit control over private property "really pisses people off," says Dan Nabel, an attorney who recently served as interim director of the Intellectual Property & Technology Law Clinic at the University of Southern California. Public outrage, he says, will "snowball into the will of the people to get something done." —*Nick Leiber*

The bottom line Repair companies and consumer advocates are pushing laws to strengthen the rights of hardware owners.

Biotech

Sifting DNA Databases For the Right Diagnosis

▶ Genetic analysts can now more quickly identify rare illnesses

▶ "Just being connected feels good. I felt alone for a long time"

In 1982, doctors told Jackie Smith's parents to take the 3-year-old girl home and enjoy her while they could. Her rare muscle disease, likely passed on from a mutation in her parents' DNA, would probably kill her before she was old enough to drive, they said. Smith, now 35, has lived in the shadow of that



diagnosis her whole life, as a small army of physicians failed to diagnose what accounts for her weak limbs and turned-in ankles. This past February, **Claritas Genomics** gave her the answer in less than three weeks.

Although analysts can quickly sequence a person's DNA for about \$1,000, doctors don't necessarily know what to look for in those gigabytes of data, because most genetic databases aren't widely shared or indexed. About 25 million Americans have at least one of 7,000 Mendelian disorders—ailments caused by a defect in a single gene—and researchers have so far matched fewer than half with genetic culprits. Claritas is working to fill in the gaps by isolating specific genes and comparing them against databases of hundreds of thousands of people's DNA compiled by analytics company **WuXi NextCode**.

In Smith's case, Claritas drew up a list of genes that affect children's nervous systems, then used NextCode's system to compare her DNA to that of thousands of other people to find similar afflictions. The company identified her condition as centronuclear myopathy, a milder form of the disorder doctors diagnosed back in the '80s. While there isn't yet a cure, Smith is participating in research that may one day lead to treatments or more supportive care. "Just being connected feels good. I felt alone for a long time," she says. "And I want to do it for the bigger picture, too. Not just for myself, but so I can be counted."

Using a conventional approach, it can take a dozen years and several bad calls by as many doctors to pinpoint these kinds of mutations, says Patrice Milos, chief executive officer of two-year-old Claritas. "The analysis and interpretation have become the bottleneck in diagnosis now that sequencing is the easy part," says Jeff Gulcher, chief scientific officer at NextCode, an offshoot of

Amgen's DeCode Genetics now owned by WuXi PharmaTech in Shanghai. DeCode got its start in the mid-1990s, collecting DNA data from much of Iceland.

Only a few organizations, including Claritas and a group at Baylor College of Medicine, are making use of large genetic data sets such as NextCode's as diagnostic tools. Absent that wider lens, many people searching for diagnoses of rare diseases eventually give up, says Anne Rutkowski, director of the Congenital Muscle Disease International Registry. "Getting a diagnosis quickly is critical," she says. "It's life-changing for families with young children."

DNA sequencing and analysis needs to be better standardized to make it more reliable, says Dusica Babovic-Vuksanovic, chair of medical genetics at the Mayo Clinic. Part of that process, she says, involves getting more organizations to build or join larger databases. Another part is keeping eager doctors from making promises they can't keep. "The tests are fairly complicated and very new," she says. "Someone who understands what these tests can and cannot do should be involved."

Genomic diagnosis proved a heart-breaking answer for Linda and Virgil Bennett, who searched for more than two decades to explain why their adopted son Dustin would tremble and violently jerk for hours or days at a time. After dozens of doctor visits and incorrect diagnoses—seizures, muscle disorders, mental health problems—a Mayo Clinic analysis showed he has episodic ataxia type I, a neurological disease characterized by hours-long attacks with no clear trigger. Dustin, a 24-year-old who functions at a first-grade level, is now on the second round of a medication doctors say should help reduce the frequency and severity of his episodes.

"This medicine seems to have relaxed him some," says Linda Bennett. Dustin is now better able to help his father around the house. It's tough knowing there isn't an easy fix just under their noses, she says, but as with Jackie Smith, it's some relief to have a clear answer. "Now we're not trying to figure out what it is," she says, "not trying to keep up with the anxiety of can this get better and can we help any more." —Michelle Fay Cortez

The bottom line A big-data approach to genomics is helping diagnose rare illnesses, though treatments for some remain limited.

Innovation

(Relatively) Cheap Fusion

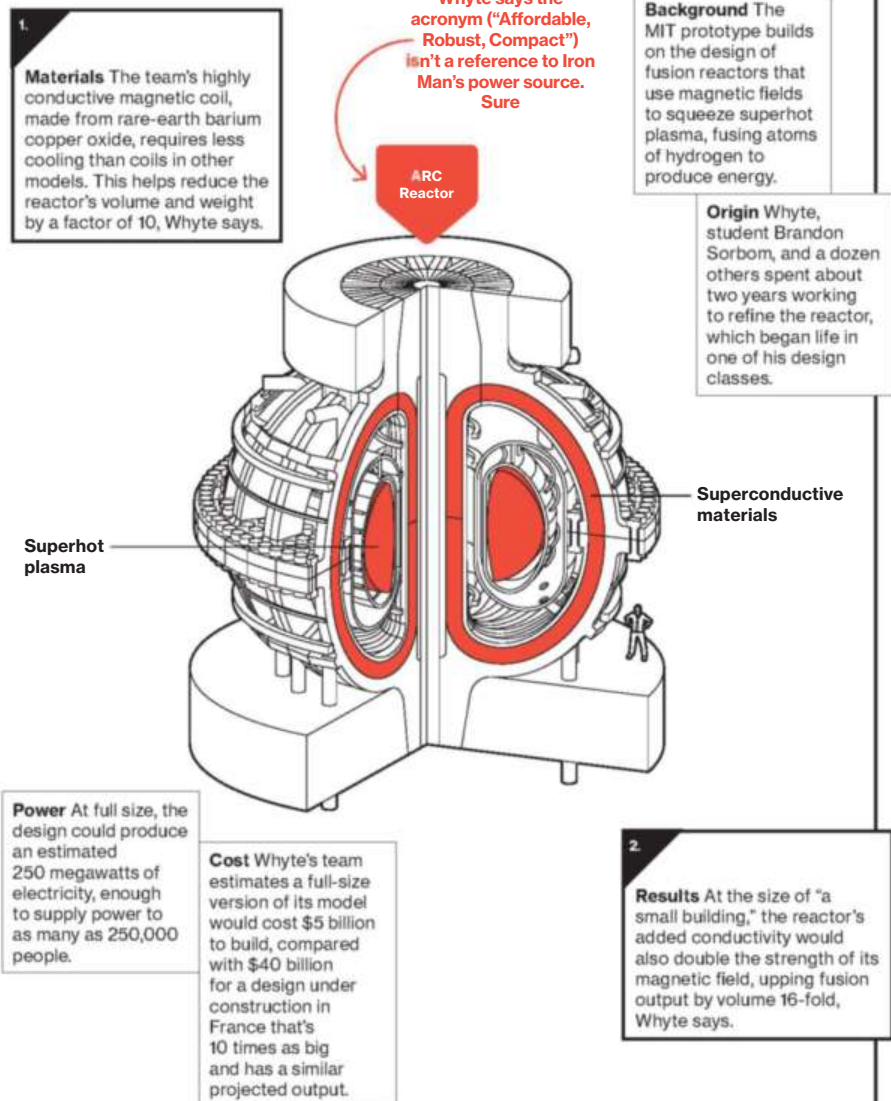
Form and function

Using new superconductive materials, Whyte's team has designed a fusion reactor they say should be able to profitably generate grid-scale power using smaller equipment at a much lower cost than current models under development.

Innovator Dennis Whyte

Age 51


Director of the Plasma Science and Fusion Center at the Massachusetts Institute of Technology



Next Steps

Mike Zarnstorff, deputy director for research at the Princeton Plasma Physics Laboratory, says Whyte's team has "a novel set of ideas that require additional R&D." The team published its research in the journal *Fusion Engineering and Design* in July. To build a tabletop prototype of the coils, Whyte is seeking \$10 million to \$15 million from industrial manufacturers and donors.

—Olga Kharif



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Adding Up the Royal Riches

► Queen Elizabeth's wealth comes from investments, property, pigeons, and stamps

► "She's not as rich as everyone thinks she is"

Queen Elizabeth II became the longest-reigning monarch in British history on Sept. 9, when her tenure reached 63 years and 216 days. She overtook her great-great-grandmother, Queen Victoria, who cemented Britain's position as a superpower with an empire encompassing a quarter of the world's land. While Elizabeth's country has lost global influence during her reign, she's ruled over an unprecedented period of wealth creation, marked by the emergence of billionaire financiers and entrepreneurs. Thus the woman who inherited

one of the richest thrones in the world in 1952 has steadily slipped down the rankings of Britain's richest people.

The 89-year-old monarch's personal fortune, largely inherited from her family, is about \$425 million, according to an analysis by Bloomberg. That's a mere 3 percent of the \$14.4 billion fortune of the richest Briton, Gerald Grosvenor, Duke of Westminster, a landowner and property developer with extensive holdings in London's West End. Europe's richest woman, Liliane Bettencourt, has a \$32 billion fortune. "The queen is a steward of the

monarchy," says Sally Bedell Smith, author of *Elizabeth the Queen: The Life of a Modern Monarch*, a 2012 biography. "She's not as rich as everyone thinks she is."

While precise details of Elizabeth's personal fortune are as closely guarded as the crown jewels, data compiled by Bloomberg show that she holds about \$75 million of investments, \$160 million inherited from her mother, personal property of \$110 million, a \$75 million stamp collection, and a thoroughbred stable worth \$10 million. (The numbers have been rounded.) The palace ►



Her Majesty's Major Assets

Numbers have been rounded

Queen mother's legacy

\$160m

Real estate

\$110m

Stamp collection

\$75m

Stocks, bonds, and investments

\$75m

Royal Stud stable

\$10m



Rare stamp

declined to comment.

The monarchy's main assets, including Buckingham Palace, the crown jewels, and the royal art collection, are held in trust for future generations and aren't the queen's private property. The monarchy is worth £57 billion (\$87 billion) to the U.K. economy, according to a report by Brand Finance, a brand valuation and strategy consulting firm.

That figure includes tangible assets such as the royal palaces as well as the monarchy's contribution to the economy through tourism and such things as the effect of royal babies on clothing sales.

The Crown Estate, an

investment vehicle for the royal family that owns London property, the U.K. seabed, as well as forests, wind farms, and the Windsor Estate, reported net assets of more than £11 billion in its latest annual report. Bloomberg didn't include the queen's 15 percent share of annual profit from the estate in tallying her fortune, because the money is used to cover palace upkeep, payroll, and other costs of the royal family.

The value of Elizabeth's investments is derived from comments made by John Colville, a director at Coutts & Co., the queen's bank, to the *Times* of London in 1971, in which he estimated her fortune at £2 million. The appreciated value of those holdings is calculated from a hypothetical investment allocation of stocks, bonds, commodities, and cash that's returned about 5 percent a year over the last 25 years. That's in line with returns typically targeted by similarly wealthy investors. The queen inherited her mother's £70 million estate in 2002, according to a report by BBC News at the time. The reported value has been adjusted by the U.K.'s rate of inflation to account for any increase in the value of the assets.

The queen also owns the Balmoral and Sandringham estates, which were valued based on discussions with London real estate broker Charles McDowell Properties. The stamp collection, which once belonged to her father, George VI, is valued based on the sale of John du Pont's stamp collection in June 2014 and discussions with Keith Heddle, managing director

of Stanley Gibbons Investment in London. The collection includes every stamp ever issued by Britain, including such rarities as the Queen Victoria Penny Black and the Two Penny Blue, among the first stamps made.

The Royal Stud, her stable, has about 25 horses in training each season, according to the monarchy's official website. It also has Royal Applause, a former champion that has sired the winners of more than 700 races. The stable's value is based on sales data from horse auctioneer Tattersalls and discussions with thoroughbred analyst Nancy Sexton, as well as guidance from bloodstock analyst Bill Oppenheim.

Her Majesty may be worth more. Other assets, including a lifetime of gifts from visitors and admirers, jewelry, and a flock of racing pigeons—not to mention her corgis—would add to her fortune. Moreover, the royal provenance of her estate could push its market value much higher.

Although the queen doesn't own it, she gets to live in what may be the most expensive home in the world. Buckingham Palace, with its 775 rooms and 40-acre garden, could be worth about £2 billion were it sold, according to Ollie Hooper, founder of luxury residential broker Huntly Hooper. "Priceless is perhaps more accurate," he says, "given the nature of the asset." —Tom Metcalf

The bottom line Queen Elizabeth II's fortune is worth about \$425 million. But no one can put a price on the love of her corgis.

Investing

REITs May Not Be The Answer for Retailers

► Hedge funds pressure big chains to trade property for cash

► "Anyone who owns commercial real estate should be thinking" about it

Activist investors have a message for retailers and restaurant chains: Spin off your property into a real estate investment trust, or we'll take over your board and force you to. Activists say that spinning off or selling properties can boost a company's stock price and reward investors who would otherwise miss a chance to benefit



Rich corgi

from record real estate values. Creating a REIT can also provide cash for companies looking to make an acquisition or other strategic move. Under pressure from hedge funds, **Darden Restaurants** has agreed to spin off property into a REIT, then lease the buildings back.

Some companies and shareholders consider this a bad idea. They say REITs holding property from just one retailer may not be the superior investments their proponents make them out to be. "The investors that are screaming for this are more short-term-focused activists that just want management teams to buy back stock with the proceeds and drive up the stock," says Joshua Schachter, senior money manager at **Snow Capital Management**, which owns **Macy's** shares. "I don't think, as a long-term investor, it's something I would want my companies doing a whole lot of." After a hedge fund said **Ethan Allen Interiors** should pursue a REIT or sale-leaseback strategy, the company said on Aug. 27 that doing so "would impose a burden of significant lease expenses" that would damage its finances and restrict its operating flexibility.

REITs are publicly traded companies that own property or mortgages. Their income isn't taxed, provided they pass almost all of it along to shareholders. **Pershing Square Capital Management** founder Bill Ackman was the first activist to encourage a large retailer to set up a REIT: In 2008 he pushed **Target** to spin off properties he figured could fetch \$5.1 billion. Target refused, and Ackman's bid for seats on the retailer's board failed.

Since then, commercial property has become more valuable. Prices have roughly doubled from a 2009 trough and are about 20 percent higher than the previous 2007 peak, says Jim Sullivan, managing director of REIT research at Green Street Advisors. That has spurred activist investors to step up the pressure. "Anyone who owns commercial real estate should be thinking through, 'What do I own, what is it worth, and what should I do with it?'" Sullivan says.

Hedge fund manager Eddie Lampert is using the REIT strategy at his **Sears Holdings**. The company put 235 Sears and Kmart stores in a REIT called **Seritage Growth Properties** that began trading in early July. The stock has gained 12 percent since its debut.

The REIT will find new tenants for the stores as Sears shrinks.

In July, **Starboard Value**, fresh from pushing Darden—which owns Olive Garden and other brands—to spin off 430 properties into a REIT, disclosed a stake in Macy's. The hedge fund estimates Macy's property accounts for about \$21 billion of the department store chain's \$29 billion total value and says the stock would be worth more if the chain spun off its real estate.

Macy's Chief Executive Officer Terry Lundgren has pledged to consider the proposal, but some analysts say there's no urgent reason for him to form a REIT. Macy's isn't Sears, which is losing money, burning through cash, and selling or spinning off assets in an effort to remake itself, according to Jeffrey Langbaum, a Bloomberg Intelligence analyst. Sears "probably wasn't viable," he says. "It had to basically become a real estate company."

Although Macy's has stumbled recently, cutting its same-store sales forecast for fiscal 2015, its management team has navigated the post-crisis U.S. economy. By owning its real estate and not being locked into long-term leases, the chain can open and close stores as needed. On Sept. 8 the company said it would close as many as 40 stores early next year. "How your business is going to fare over the next 10, 15, 20 years—that's the unknown," says Sullivan, whose firm is advising Macy's on the potential spinoff. "And what retailers and restaurant chains generally want is flexibility, the ability to adapt to new business conditions."

The bulk of Macy's real estate value lies in Manhattan's iconic

Quoted

"We will not want to stimulate exports through depreciation. China will not want to see any currency wars."

Chinese Premier **Li Keqiang** at the World Economic Forum's summer meeting in Dalian, China

Herald Square store. That means a Macy's REIT would be based largely on one building. Faced with a choice, Langbaum says, investors might prefer to buy shares in real estate investment trusts with multiple tenants. He asks: "Who's going to buy stock of a REIT that has nothing other than long-term leases to one tenant?"

—*Lauren Coleman-Lochner and Lindsey Rupp*

The bottom line With commercial property values 20 percent above their 2007 peak, retailers and restaurants consider REITs.

Stocks

A Job Website Thrives in The New Japan

► Dip's shares soar as lifetime employment fades

► "Investors have been pricing in our future worth"

The breakdown of Japan's lifetime employment model has been tough on workers but great for **Dip**, a company that operates one of the country's largest jobs websites. From Nov. 14, 2012, through Sept. 4, Dip's stock climbed 4,955 percent, making it the best performer of the 1,887 companies in the benchmark Topix index. It rose almost five times as much as the runner-up, aircraft parts maker Jamco, which gained 1,021 percent.

Dip is flourishing in the new Japan, where almost 4 in 10 workers no longer have the job security prevalent in the ►

nation's economy through its 1980s boom. Companies have become less willing to hire full-time workers, turning instead to part-timers who are easier to fire and often receive lower pay and fewer benefits. With employers flocking to Dip to advertise job listings, the company saw annual operating profit jump almost twentyfold in the two years through February.

The stock has fallen almost 30 percent from its late-July peak. Still, some analysts say it's overpriced. "Their share price may have risen too far," says Nobuyuki Fujimoto, a senior market analyst at SBI Securities in Tokyo. Dip traded at 36 times earnings as of Sept. 4, more than twice the average price-earnings ratio on the Topix. Many other companies provide similar services on the Internet, and tougher competition could eat into Dip's market share, says Masanori Minami, an analyst at Ichiyoshi Research Institute.

Dip Chief Executive Officer Hideki Tomita says the jump in the stock is justified by the company's potential growth. "Investors have been pricing in our future worth," he says, especially in light of coming legislation. Until now, temporary workers hired through agencies had to be made permanent after three years or let go. A law to remove this restriction passed the lower house of parliament in June and is expected to be approved in the upper chamber as soon as this month. Tomita is all for the change. Japan's current labor laws are "warped," he says.

Dip's main website, baitoru.com, targets young people who move from one part-time job to another, staffing the country's convenience stores and karaoke bars. It operates a second site that focuses on temporary workers.

Prime Minister Shinzo Abe's economic stimulus policies have boosted corporate profits and demand for employees. In July, Japan's jobs-to-applicants ratio rose to 1.21, the highest since

February 1992.

When the economy improves, companies add temporary and part-time jobs first, says Minami, the

analyst. Temporary and part-time employees accounted for 37 percent of the workforce last year, up from 15 percent in 1984, according to the health ministry.

Tomita founded Dip in 1997 in Nagoya, an industrial city west of Tokyo known for its proximity to Toyota's headquarters. Tomita set up the company after his father's teaching-materials business collapsed. "Becoming a salaryman wasn't an option," he says. "Starting my own business was the only choice." While benefiting from Japan's shift away from permanent employment, Tomita has different ideas for his own company. About 86 percent of the staff work full time, and Tomita plans to add at least 300 employees next year. "We try to hire people straight out of college and make sure they have the resources to grow," he says. "We try to show that the company takes care of people." —Yuko Takeo and Nao Sano

The bottom line With companies flocking to its site to find employees, Dip has seen its stock climb 4,955 percent in three years.

Emerging Markets

Brazil's Brokers Succumb to the Slump

► Investors shun a stock market that was expected to boom

► "Instead of moving forward, we're going backward"

Brazil's second-oldest brokerage, **Corretora Souza Barros Câmbio e Títulos**, survived almost nine decades as the nation suffered three military coups, a sovereign default, and hyperinflation in the 1980s that doubled prices every other month. But it couldn't withstand today's troubles—a plunge in commodities prices coinciding with a corruption scandal that's crippled Brazilian builders and left President Dilma Rousseff fighting for her political survival. At Souza Barros's midcentury offices in downtown São Paulo, only a few of the once 150-strong workforce remain to tie up loose ends. In a note to clients and employees posted on its website, Souza Barros thanked "everyone

Ibovespa Brasil São Paulo

Stock exchange index



who participated in these past 87 years," saying, "we wouldn't have gotten here" without them. In the end, it couldn't overcome competition and a stock market that never quite lived up to its potential.

In 2009, Edemir Pinto, chief executive officer of **BM&FBovespa**, Latin America's biggest stock exchange, said the exchange would lure 4.5 million new investors by 2015. He reiterated that pledge as recently as September 2014. A BM&FBovespa study, conducted by the Getúlio Vargas Foundation in 2010, estimated the likely number of new investors at 1.2 million by December 2020—twice the 558,000 investors the market has now. Even that's turning out to be overly optimistic: The exchange has added fewer than 6,000 investors since 2009.

"The exchange is out of touch," says Raymundo Magliano Filho, director of brokerage **Magliano Corretora** and a former CEO of BM&FBovespa. "Instead of moving forward, we're going backward." BM&FBovespa's press office wrote in an e-mail that the estimate to boost individual investors tenfold by 2015, to 5 million, was based on "extraordinary" prospects for Brazil's economy in 2009. A worsening domestic outlook contributed to "a frustration of expectations."

The 2010 estimate was based on projections of average economic growth of 4.1 percent a year from 2010 to 2020. Instead, growth in Brazil has plummeted. Latin America's largest economy slid into a recession in the second quarter of this year—shrinking 2.6 percent—and economists in a weekly central bank survey are forecasting the longest contraction since the 1930s.

The prospects of attracting so many new individual investors sparked a rush among the nation's roughly 200 brokerages to hire workers and improve technology systems. They



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Lufthansa

Bid/Ask

By Caroline Winter



\$2.4b

Media General expands its empire. The Richmond (Va.)-based business is acquiring Meredith for \$2.4 billion in cash and stock. The combined company, to be called Meredith Media General, will be the third-largest owner of broadcast network affiliates, reaching about 30 percent of U.S. homes with a TV. Other assets will include magazines *Shape* and *Better Homes & Gardens* and websites such as Allrecipes.com.

\$11.6b



Li Ka-shing makes a power play. The billionaire's Cheung Kong Infrastructure is buying the shares of Hong Kong's Power Assets that Li's companies don't already own.

\$8.1b

Woodside Petroleum bids for Oil Search. The target company recently saw profits jump, driven by its Papua New Guinea liquefied natural gas project.

\$7.6b

HNA Group buys an Irish aircraft leasing company. Bohai Leasing, a unit of the shipping conglomerate, is purchasing Avolon Holdings.

\$6b



Blackstone bolsters its real estate portfolio. The company has acquired Strategic Hotels & Resorts, owner of high-end properties such as Manhattan's Essex House.

\$5.3b

Mitsui Sumitomo Insurance looks overseas. The company will pick up Amlin, a Lloyd's of London insurer, diversifying into Europe and North America.

\$3.5b

Concordia Healthcare buys drugmaker Amdipharm Mercury. The deal would extend the Canadian company's commercial reach into more than 100 countries.

\$490m



Interoute Communications grows. The owner of one of Europe's largest communications networks is purchasing U.K. service provider Easynet.

◀ also aggressively cut fees to lure customers. Half of Brazil's 10 largest brokerages have posted losses every year since 2012, leading to layoffs and consolidation. Magliano Corretora has fired two-thirds of its 105 employees in recent years, according to company director Filho. **SLW Corretora de Valores e Cambio** sold its portfolio to **Guide Investimentos** in March, joining more than 30 other brokerages that have exited the business since 2011, according to the central bank, leaving about 195 in operation. Others are merging to weather the downturn. **Rico**, the Brazilian unit of **Caixa Geral de Depósitos** combined operations in July 2014, the same month that **XP Investimentos** bought Clear Corretora de Valores.

For months, Souza Barros traders swapped rumors that the end was near, but it wasn't until the firm started selling its furniture that the worst was confirmed, according to one former employee who asked not to be identified. The company's CEO, Carlos Alberto de Souza Barros, the grandson of the founder, didn't respond to requests for comment. "We see a bad scenario, with products sold in mass and price wars," he told the newspaper *Valor Econômico* in May when announcing the decision to close. "That's not the way Souza Barros operates."

The Ibovespa stock index has lost almost 20 percent from its peak in May and is down 6.5 percent for the year through Sept. 8. Currency declines have worsened the losses for foreigners—in dollar terms, the index has dropped 35 percent. Shareholders have pulled \$888 million from the iShares MSCI Brazil Capped ETF this year, the biggest withdrawals from any exchange-traded fund in New York. "It's a huge challenge that the sector is facing now," says Caio Villares, director of the brokerage Concórdia Corretora and president of Ancord, the financial industry association. "The exchange has to work with brokerages on financial education to make the stock market more popular."

—Denyse Godoy

The bottom line With Brazil's stock market down 6.5 percent this year, investors are fleeing and brokerages are closing.

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Apple has made many things over the years, but its process has remained essentially the same: Find something ugly and complicated and make it prettier and easier. Prettiness, in brushed aluminum, is more or less a permanent state. Ease, however, is constantly evolving, which is why a few days before the geek hootenanny known as Apple's September Event, Jony Ive's focus isn't on a new version of Apple TV or an iPad the size of a doggy door, but on a feature. It's called 3D Touch, and it makes using an iPhone even easier. "Ultimately, *this* is our focus," says Ive, squeezing a new iPhone 6S. "This is what galvanizes our efforts right across the company." And 3D Touch, he adds with emphasis, "is something we've been working on for a long time—multi, multi, multi years."

The Apple design studio, like Stonehenge, is more mystical in the imagination than in real life. It's open plan, with thirtysomethings of indiscriminate nationality, and very discriminate grooming, working quietly in front of desktop iMacs. There are long wooden break tables near a small kitchen with a gleaming espresso machine that appears more worshiped than used. The floors are concrete. The music is indie, the lighting crisp. The wall-length bookcase has the meticulously unarranged look of every design bookstore you've ever lost an hour in.

The only hint that this is Apple's magic room is a curtain. Behind it, says Ive, is the industrial design studio, where there are explorations in progress, milling machines, and a few remarkable futuristic things that he cannot, alas, remark upon. 3D Touch came to life back there.

Several years ago the designers and engineers realized that phones contained so many functions—messaging, maps, apps, links, photos, songs—that people were wasting a lot of time retreating to the home button to bounce between them. This is the *ne plus ultra* of First World problems, but Apple exists, unapologetically, to eradicate even the tiniest bit of friction between its products and its users.

"'Inevitable' is the word we use a lot," says Alan Dye, Apple's vice president of user interface design. "We want the way you use our products to feel inevitable."

In the near decade since its birth, the iPhone has shed the baby fat of its first edition and grown into a sleek adolescent (with a big brother, the 5.5-inch Plus version, introduced in 2014). With the notable exceptions of Siri and Apple Maps, so many features have been added so seamlessly that a meaningful critique is almost impossible. It's like reviewing infinity. But the appreciation of excellence fades when your customers are conditioned to expect it. Refinement doesn't get a standing O. "The bar for functionality is higher with every generation," says Phil Schiller, Apple's senior vice president of worldwide marketing. "You can't just say, 'Here it is. It does the same thing 5 percent better than last year.' Nobody cares."

From the iPhone's rounded edges to its imperturbable Genius Bar employees, Apple would like its customers to think of it as an effortless company, where transcendent technology emerges like freshly baked bread from an oven. It's just as much an illusion

as Disney's happiest place on earth. "Engineering-wise, the hardware to build a display that does what [3D Touch] does is unbelievably hard," says Schiller. "And we're going to waste a whole year of engineering—really, two—at a tremendous amount of cost and investment in manufacturing if it doesn't do something that [people] are going to use. If it's just a demo feature and a month later nobody is really using it, this is a huge waste of engineering talent."

Schiller believes that 3D Touch is a breakthrough, but the designers aren't so sheltered that they're oblivious to his point. "I mean, it's remarkable that within a corporation that has to deal with so many absolutes...so many metrics..." Ive says, trailing off.

"You know, it's so very hard to measure [what designers do]. We can be working on something for a long time and still not know quite how it's going to work out."



Apple design projects have no formal start and no predetermined finish. Months of wrong turns and scenic routes are common, and there are countless schemes going on simultaneously. Which is why no one really remembers when the group rallied around adding 3D to the iPhone, only that they kept asking: What if, instead of swiping through apps or routing all of your browsing through the Grand Central station of the home screen, you could press the glass in one function and reveal a shortcut to another? And what if the phone understood this desire based entirely on changes in the pressure you applied?

Everyone knows Apple is a design-first company, but the degree to which this is true has, if anything, been underappreciated. The relationship between the designers and the nondesign executives is a little like the relationship between American Pharoah and his trainer. One side is nominally in charge, but it's conspicuously in service to the other. Craig Federighi, Apple's senior vice president of software engineering, says that at most software companies the designers decide what they want and the engineers respond with what's easy to build. "Every single feature becomes this unholy compromise," says Federighi, who began his career at Apple and spent a decade at Ariba, a maker of financial management software, before returning in 2009. "With [3D Touch] it was only at the moment where we finally got a design experience that's like, 'Yes! This is what we want!' that we [asked] how hard it's going to be to make."

The answer: really hard. But not as hard as it would be for a competitor. Apple has such unprecedented resources (roughly \$200 billion in cash on hand) that it's been able to collect many of the world's top specialists, across a variety of fields, and stash them for a rainy day. A former executive not authorized to speak for this story suggested that Apple's \$3 billion acquisition of Beats last year had nothing to do with headphones; it was about buying Beats Chief Executive Officer Jimmy Iovine's savant-like knowledge of the music business. "If you need to solve a particular problem, usually the best person in the world already works here," says Dye.

Still, working backward from a design idea to create



a real-world, fail-safe, supply chain-able product for hundreds of millions of people can't be done with resources alone. Apple isn't in the habit of explaining how it makes things work, because the people at Samsung can read, and hold a patent on a similar technology. But in lieu of the usual polite deflection, Federighi picked up an iPhone 6S and explained one of 3D Touch's simpler challenges:



"It starts with the idea that, on a device this thin, you want to detect force. I mean, you think you want to detect **force**, but really what you're trying to do is **sense intent**. You're trying to read **minds**. And yet you have a user who might be using his thumb, his finger, might be emotional at the moment, might be walking, might be laying on the couch. These things don't affect **intent**, but they do affect what a sensor [inside the phone] sees. So there are a huge number of technical hurdles. We have to do sensor fusion with accelerometers to cancel out gravity—but when you turn [the device] a different way, we have to subtract out gravity... Your thumb can read differently to the touch sensor than your finger would. That difference is important to understanding how to interpret the **force**. And so we're fusing both what the **force** sensor is giving us with what the touch sensor is giving us about the nature of your interaction. So down at even just the lowest level of hardware and algorithms—I mean, **this is just one basic thing. And if you don't get it right, none of it works.**"

For a technology company, there's a surprising amount of pencil-and-paper sketching as people begin their work. Designers are spared a lot of meetings and obligations ("We love our bubble," says Dye), but they mix so intensely with materials specialists and engineers that they've essentially become one amorphous, cross-functional team. Turnover is unheard of, and new staff is brought in only after a courtship that makes selecting a spouse look careless by comparison. "One joke with the design team," says Dye, "is that we don't hire people until we've been on family vacations together."

When the group lands on something promising—and "something" is the right word, because they're

often working with ideas that don't have terms to express them yet—they program it into a rough prototype. Software prototypes (usually just printouts of proposed interactivity) go on a magnetized wall. Hardware prototypes are often comically bigger than an actual device and are set on a table for everyone to gather around and critique. The core members have been together for so long that feedback "is often sort of preverbal," says Ive of the exchanges of grunts and nods. At the same time, "we're not characterized by being reticent with our opinions."

Dye, who had lead design roles at Kate Spade and Ogilvy & Mather before coming to Apple in 2006, says that most of the designers feel constant low-level anxiety.

"I'm scared to death that at some point I'm going to get found out. You know, Tim [Cook] is going to realize the truth about me, which is I'm terrible."

The only thing that keeps the anxiety from turning to guilt is performance. "If you look at all the interactions we engineered into this phone, none of them ended up where we started," says Federighi. Working with Corning, Apple created pliable iPhone cover glass. Swipe it, and the phone works the way it always has. But press it, and 96 sensors embedded in the backlight of the retina display measure microscopic changes in the distance between themselves and the glass. Those measurements then get combined with signals from the touch sensor to make the motion of your finger sync with the image on screen.

Some of this technology was first revealed in the Apple Watch, which has a feature called Force Touch. But 3D Touch is to Force Touch as ocean swimming is to a foot bath. Screen size makes a difference, but the software on the iPhone 6S has a liquid ease. Apply a tiny bit of pressure anywhere you want to explore something—a restaurant link inside a text, an 11 a.m. meeting invite buried in an e-mail—and a peek at the restaurant's Web page or a window into your calendar hovers expectantly in the middle of the screen while everything else blurs into temporary opacity. Press a little harder, and what you've been peeking at pops fully into frame. Release your finger, and you're right back where you started. Presto chango, no home button required.



Of course, this is the exact opposite of how things work in the physical world. When you press a real object it's obscured, and it's the things surrounding it that come into sharper focus. The designers concede they were far down a rabbit hole until they

remembered, as Federighi says, that while the hardware was measuring force, the software needed to measure intent. To make what is counterintuitive feel normal, each on-screen “peek” and “pop” is accompanied by a 10-millisecond or 15-millisecond haptic tap, little vibrations that say “good job” to your fingers when an action is complete. (The precise timing of those taps is a cosmology all its own.) For the years of effort, 3D Touch will be judged a success only when its existence fades completely into a user’s subconscious. It takes about four minutes.

Apple is feeling confident enough that it’s integrated 3D Touch into everything on the iPhone 6S and 6S Plus—the phone, the weather app, iTunes, messaging, and the Web. Facebook and Instagram plan on incorporating it into their iOS apps shortly after the phones arrive in stores on Sept. 25 (at the same price as last year’s models), and a slew of other developers are waiting for a chance to open up the software. “This is probably the biggest innovation since the phone first came out,” says Andy Wafer, CEO of Pixel Toys, which created the acclaimed zombie shooter game Gunfinger. Because the screen senses force, and responds with taps, we may be on the verge of great leaps forward in the destruction of virtual flesh.



“Of course, everything is shooting things,” says CEO Tim Cook with a wry smile during a brief stop in the design studio.

Apple starts planning its keynote events four months in advance, and as September approaches Phil Schiller is sweating over just how long this one might go. “We’re trying hard to keep it under two hours,” he says. “I think we’re going to be over.” This, too, can be pinned on the designers. “We’ve never released a feature to make a date,” says Ive. They also don’t hold features back. Things are ready when they’re ready, and this season is swollen with new ideas.

Sure enough, by the time OneRepublic finished singing, the show had clocked in at 2 hours and 20 minutes. Aside from 3D Touch, there’s a new Apple TV (\$149 for a 32GB version) that app-ifies video, has a remote for gameplay, and gets close to a universal search function that finally brings order to the chaos of streaming services and broadcast options. There’s also a 12.9-inch iPad Pro (starting at \$799, and available in November) with a sleek stylus called Apple Pencil (\$99). More stage time was devoted to new Apple Watch bands, iPhone camera upgrades, iPhone hardware upgrades, enhanced iPhone video and video editing, the A9 microchip (70 percent faster than its predecessor), and the introduction of Live Photo, which is neither picture nor video but something in between, like a living memory. Each presentation was discretely impressive and cumulatively exhausting.

“The biggest worry for me is, are we getting too locked in a formula?” asks Schiller. He recalls the 2002 Worldwide Developers Conference, at which Steve Jobs delivered a eulogy for Mac OS9, complete with cheesy organ music, a smoke machine, and a casket rising through the middle of the stage. “We haven’t done anything quite that outlandish in a long time. It may be part of being a bigger company, not this small

upstart. We feel a little uncomfortable being too strange and getting too far away from ourselves.”

When Ive’s promotion to chief design officer was announced in May and his deputies were given more day-to-day authority, the cottage industry of Apple gossip sites surmised this was the beginning of a slow fade. Ive was said to be too impatient for a company of massively integrated product lines. There’s no evidence this is true, and the relationship between Ive and Cook is close and mutually admiring. But Ive is vigilant in guarding against the creative dangers of Apple’s enormity. “There’s a tax that comes with interoperability and what can be seen as complexity, which is it can actually be an impediment to innovation.” He regularly asks himself, “Are we developing stuff to make things easy for ourselves, or are we developing products to move this forward? I have no interest, and I don’t think anybody here has interest, in just designing something that will fit into a family and behave itself.”

Ive is proud of 3D Touch because it improves the experience of owning an iPhone, but he’s also proud of what it says about Apple. He can’t think of another company that would have put so many resources into such a seemingly subtle, yet potentially profound, change.

“Why would we spend **this many years** working on 3D Touch when you can do some of these things with a button? Well it’s, it’s just such a fluid connection with your content,” says Ive, a little **dreamily**. “And not everything is binary, is it?”

Apple’s faith in design helped make it the first company to reach a market cap of more than \$750 billion. It also means that every few years it has to bet its future on the instincts of a few people with strong opinions about how things should work. Ive would rather be sentenced to life with a flip phone than subject his designs to focus groups, so when the company makes a change like 3D Touch, its business plan, basically, is to trust that he and his team are right.

For all that’s changed at Apple, that faith is what links it most strongly to its roots. In January 2007, when the first iPhone was announced but not yet on shelves, Jobs escorted the device on a voyage through America’s media outlets. In the middle of a drab conference room on a high floor of a New York City office tower, he placed the device into the hands of journalists who would, presumably, write that it was as world-changing as he claimed. Jobs dropped the phone to prove that the glass wouldn’t shatter. He activated the speaker to demonstrate call clarity. It seems obvious now, but the minimalist Jobs had even pared away the physical keyboard, and that had to be sold, too. He asked a volunteer to tap on the virtual keyboard that had replaced it on screen. He was in full seduction mode, and about to reach his crescendo—

“It doesn’t work.”

Jobs paused and tilted his head, not unkindly, in the direction of the disturbance.

“I keep getting typos,” the volunteer said. “The keyboard’s too small for my thumbs.”

Jobs smiled and replied: “Your thumbs will learn.” **B**

An aerial photograph of a dry, arid landscape. A large herd of cattle is gathered around a small, irregularly shaped pond in the lower right quadrant. The ground is parched and cracked, with sparse, dry vegetation and scattered trees. The overall scene conveys a sense of drought and hardship.

The

Drought is a global curse, from rural Australia
to inland California to megacity Brazil.
And it's only getting worse

An aerial photograph of a dry, arid landscape in Queensland, Australia. The terrain is sandy and sparsely vegetated with small, scattered trees and shrubs. A prominent feature is a small, irregularly shaped dam (dug pit) filled with water, located in the lower-left quadrant. Several cows are visible grazing near the dam. To the right of the dam, there is a larger, denser cluster of trees. The overall scene depicts a harsh, dry environment during a significant drought.

Big Dry Spell

Ranchers in Queensland, Australia, dig pits, which they call "dams," to catch rainwater. This one will run dry within weeks
Photograph by Antoine Bruy

Cattle Drain

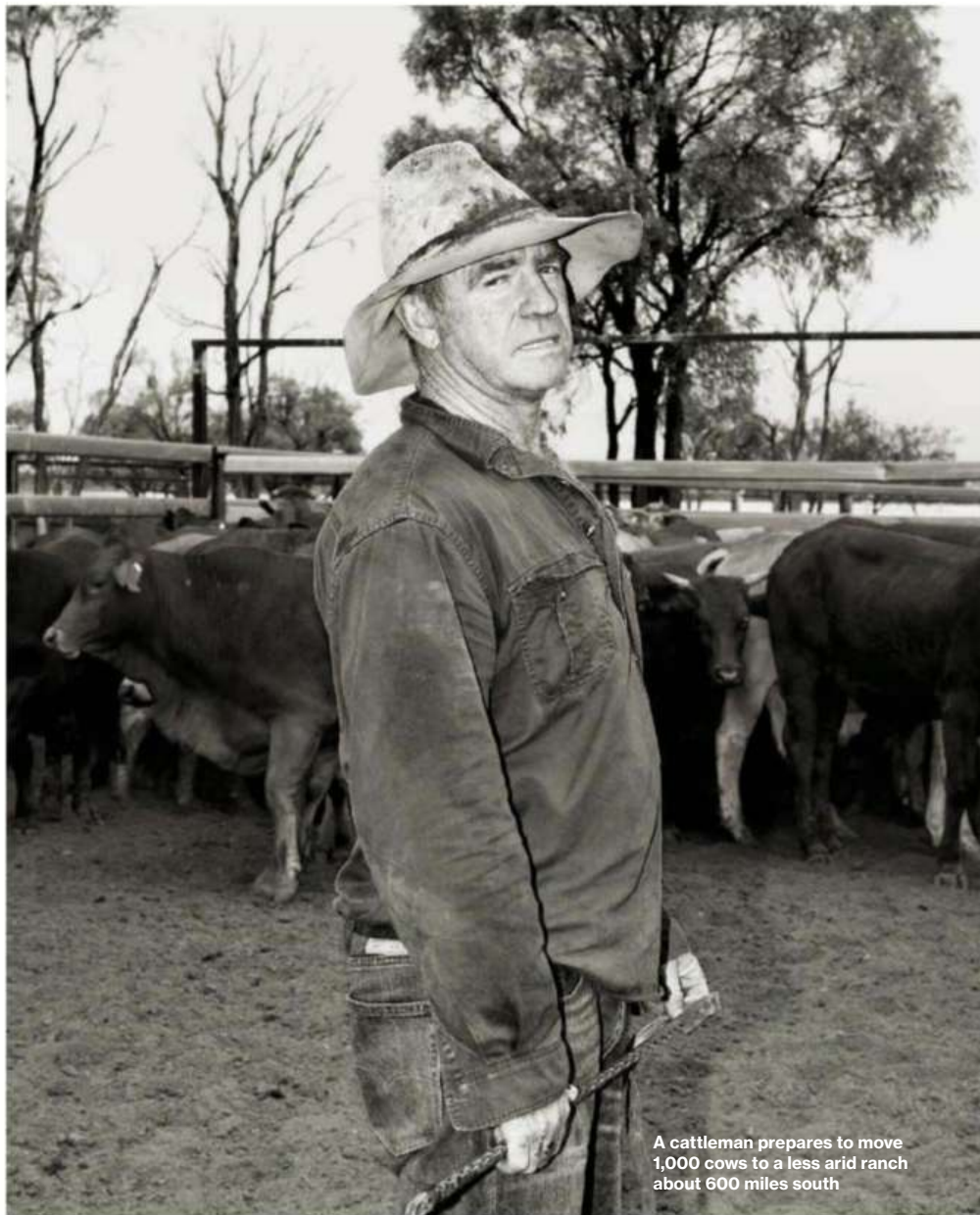
Photographs by Antoine Bruy

In Australia, the epic Millennium Drought that began in the mid-1990s was officially declared over in 2012. But in much of rural Queensland, there's been no relief. About 80 percent of the northeastern state remains affected by water shortages, putting particular stress on the center of Australia's cattle industry.

Ranchers are changing nearly all aspects of their business. To keep their stock manageable, they're culling herds, planning to slaughter a record number of cows this year. That means they must try to find new markets to sell the meat without driving down prices. Currently, Australia supplies more than a third of the beef imported by the U.S.

Ordinary grass has become a precious resource. Ranchers are killing kangaroos they say are devouring food their cows need. Without enough for their cattle to graze on, ranchers are tearing down mulga trees, whose leaves cows can digest. If even that falls short, some cattlemen truck their herds toward the coast or down south, where the drought is somewhat less acute.

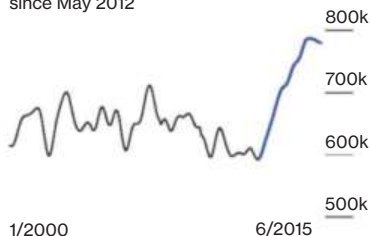
—Karen Weise



A cattleman prepares to move 1,000 cows to a less arid ranch about 600 miles south

Killing Floor, Through the Roof

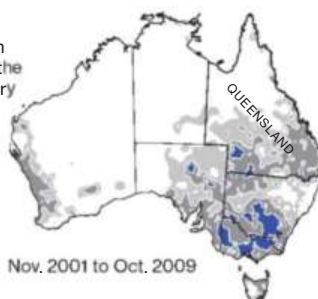
Trend estimates for slaughtered cattle show a 31.7 percent rise since May 2012



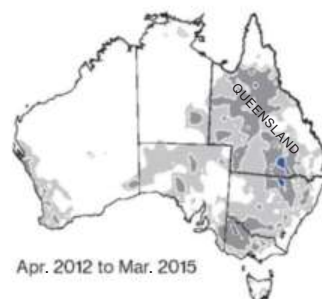
Extra Dry

Much of Queensland has been hit harder in the current drought than in the Millennium Drought, which was the worst on record for the entire country

Rainfall totals
 ■ Lowest on record
 ■ Well below average
 ■ Below average
 ■ Average or above



Nov. 2001 to Oct. 2009



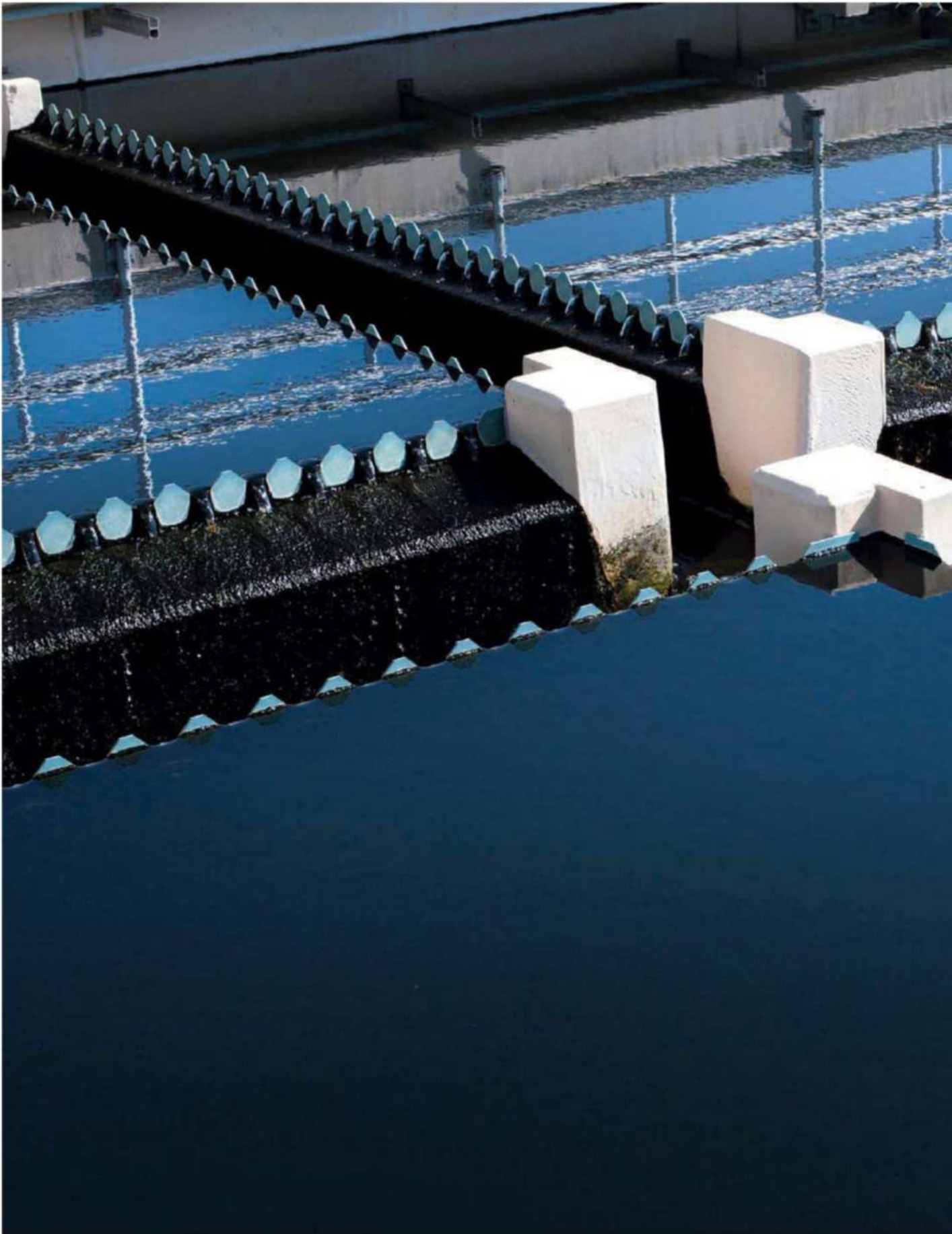
Apr. 2012 to Mar. 2015

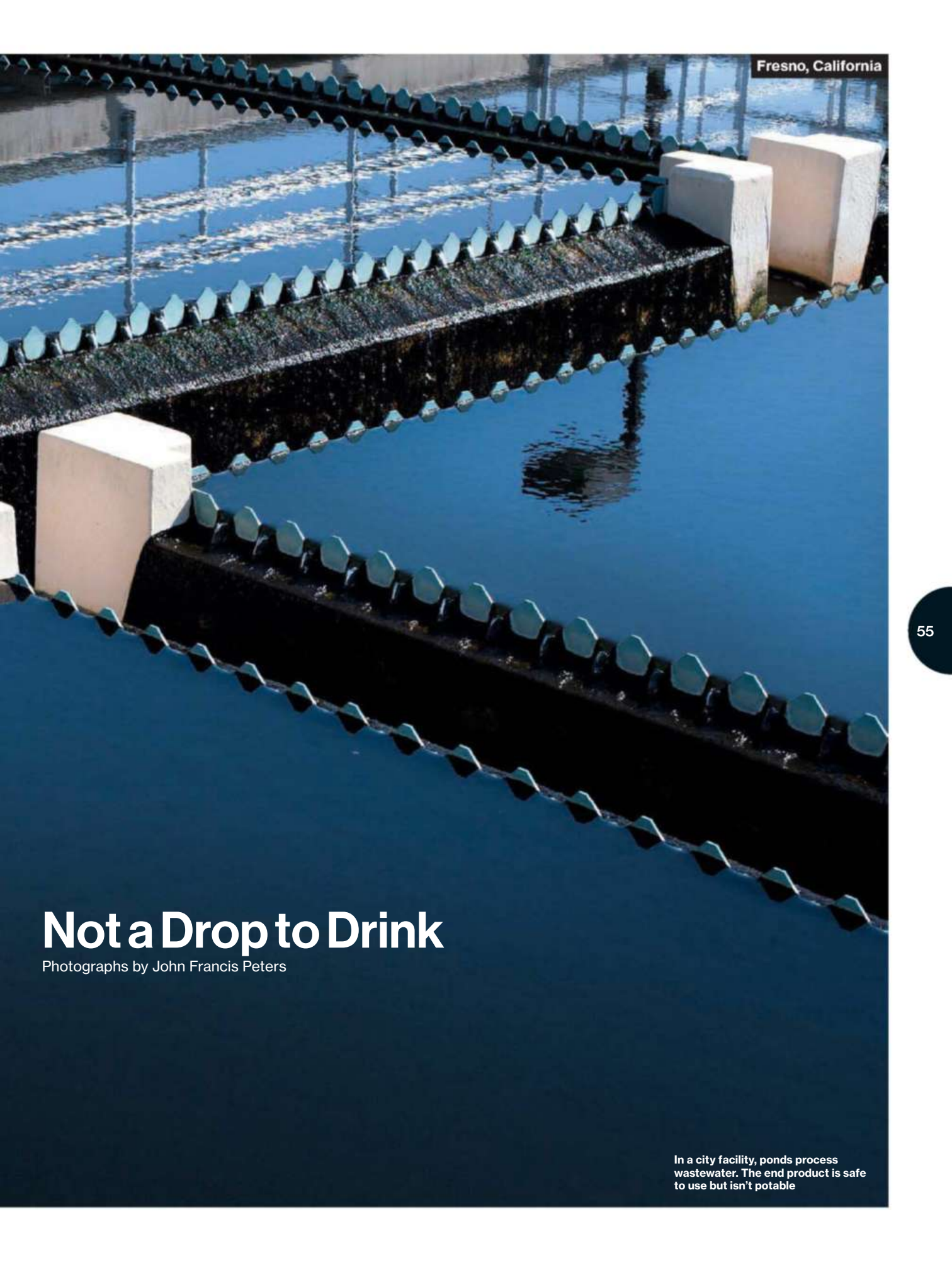


The herd will be transported by a caravan of 10 double-decker trucks, known as "road trains"



With grass in short supply, ranchers bring down mulga trees so cattle can feed on their leaves





Fresno, California

55

Not a Drop to Drink

Photographs by John Francis Peters

In a city facility, ponds process wastewater. The end product is safe to use but isn't potable



Fresno, California

In 1871, Leland Stanford was building his railroad across California's Central Valley when he spotted a lush wheat field amid the dry prairie. "Wonderful!" he said, according to lore. "Here we must build the town!" Fresno was founded the next year and is now home to half a million people. The area, so lush it was first called Green Bush after a local spring, became the center of the country's food production, irrigated with canals fed by the dense Sierra snowpack. "In Fresno, water has always been easy to find and cheap to get," says city spokesman Mark Standriff. Four years into California's record drought, however, that's no longer the case.

Farmers have left land fallow and drilled deeper into the ground to pump up water.

Some of it's contaminated by nitrate plumes seeping in from agriculture. Don Wells, an aptly named conservation monitor with the city's utility department, says businesses that depend on water for their core activities, like bottlers and golf courses, have wrung any excess out of their operations. Strip malls are tearing out decorative grass; restaurants are swapping out rinse nozzles; and "virtually every customer has a toilet issue," Wells says. "We are in a dynamic change." The city's hospitals now use recycled water.

In April, Governor Jerry Brown announced the first mandatory water restrictions in California's history. Fresno's goal was a 28 percent year-over-year reduction. By July the city's homes and businesses had cut water use by 31 percent. Here's how they're doing it. —K.W.



Fresno uses less water even as the population grows

January through July water production (gallons)

30b

20b

10b

0

Annual population estimate

525k

475k

425k

375k

1993

2015



How much water can a business do without?

Savings from fixing leaks, replacing inefficient toilets, or changing irrigation practices:

Small strip mall, Apr. 2015 to May 2015

13,299 gallons

Warehouse/distribution center, Jan. 2014 to Feb. 2014

304,204 gallons

Large government site, Apr. 2014 to Apr. 2015

602,546 gallons

DATA: CITY OF FRESNO, U.S. CENSUS BUREAU

1. A local chocolatier has switched to sanitation wipes to clean equipment
2. The water at a car wash falls into grates for recycling
3. Processed wastewater heads for a construction site; there, it will be used to spray down dust, as required by environmental laws
4. Fresno residents with special badges can get free recycled water to use for gardening
5. A farm growing corn to be used as animal feed is irrigated with reclaimed water
6. A city landscape conservation specialist tells a resident how to use a new kind of fixture
7. Dye helps show whether a toilet is leaking
8. Some homeowners are turning to lawn painting to keep turf green
9. Purple pipes indicate nonpotable water supplies
10. A plant nursery is adding drought-tolerant grass to its inventory





The Unwashed

Photographs by Sebastián Liste

Sales of Batiste Dry Shampoo have spiked 60 percent as Paulistas spend less time in the shower

Almost a year ago, a severe water shortage drove a neighborhood near São Paulo to burn tires in protest. The governor of São Paulo state, dominated by Brazil's biggest city, had to send in 20 trucks of potable water to cool the situation. But the crisis hasn't ended. In February of this year, the Cantareira, one of six reservoir systems that supply the city of 21 million people, was down to just 6 percent of its 1.3 billion-cubic-meter capacity. Even after seasonal rains, the level is still precariously low. The city's utility, Sabesp, has about five months' worth of water for its clients. "We burned through our reserves," says Samuel Barreto, a specialist for water security at the Nature Conservancy of Brazil. "We're still trying to get out of the eye of the hurricane."

Sabesp has tried to ration water by reducing pipe pressure, which has often left taps dry in hilltop homes and faraway slums. The governor has started work on twin 7-mile pipelines to siphon water from a richer and nearly full reservoir south of the city. That is not going to be enough of a solution if Sabesp does little with its existing infrastructure. Its old pipes are in disrepair; the utility loses 18.2 percent of its water each year to leakage. —Blake Schmidt

Sabesp daily close, in Brazilian reais
The water authority's share price has fallen 53 percent since peaking in March 2013



DATA: COMPILED BY BLOOMBERG



New pipes to an additional reservoir were to be ready in May. They've been delayed until this month



Sales of swimming pools at this roadside business have fallen 60 percent since the crisis began



A resident in the outskirts of São Paulo heads for a plastic water storage tank she shares with other families

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September 30, 2015

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CRAFT
YOUR OWN ARTWORK

WEAR WHITE SHOES IN FALL

**LOWER YOUR
BILLS**

**SMELL
BETTER AT WORK**

ROOTS

Root, Root, Root
for

*How the High Times Bonghitters
became the Yankees of New York media softball*
By Ira Boudway

the
stoned

Photographs by Jason Nocito

The team

T

he *High Times* Bonghitters are rolling from the get-go against their chief rivals, the *Wall Street Journal*, on a balmy August evening in New York's Central Park. The outfield grass is thick and green as the Bonghitters mow down the *Journal* in the top half of the first inning, then score three runs on four hits in the bottom. Team captain and *High Times* Chief Operating Officer Michael Safir,

31, roams the sideline, score book in hand, trying to keep his players relaxed and ready. "Let's do it, Bonghitters!" he shouts. Then he calls to the left fielder to move in.

The slugging stoners, as they're also known, went on to win 11-4. They never trailed and never seem bothered. The highlight came in the bottom of the sixth, when Big D, who's in his 21st season as a Bonghitter, ripped a standup triple to the gap in right center. (Big D, like many players, preferred not to give his name, because it's still against federal law to smoke marijuana.) The victory brought the team's record to 19-1 for the season and secured them the top seed in the New York Media Softball League (NYMSL) playoffs. After the game, players gathered on the infield, as they always do, to sing *The Ol' Bong Game*: "So it's root, root, root for the stoned team/Everybody get high."

Americans have been playing softball with their co-workers since the game grew out of several variants of baseball in the late 19th century. In 1895, Louis Rober, a lieutenant in the Minneapolis fire department, organized games of "kittenball" to entertain firefighters between runs. Blue-collar company teams proliferated over the next half-century. Office workers joined in later, in the 1970s and '80s.

The NYMSL was founded in 2007, though Manhattan's magazines, newspapers, and radio and TV stations had been playing informally for decades. Their version is decidedly low-key. There are base-running mistakes and errors in the field, and there's lots of positive reinforcement. To see screaming meatheads, you'd have to watch the teams from law firms and real estate brokerages that also play during the summer in the park. Or leave town altogether. Safir, who grew up in Buffalo, says games there are more competitive. "I played with one of my Buffalo friends last year," he says, "and I told him, 'The best player on our team would probably start on your team, but I would never see the field.'"

Back in the city, the Bonghitters remain an industry powerhouse. They're the defending league champions after defeating the *Journal* in last fall's final. And they've been blazing through opponents since forming in 1991. This season the Bonghitters have downed all six of the other official members of the NYMSL—Chartbeat, *Institutional Investor*, *Forbes*, the *Wall Street Journal*, WNYC, and the *Bullets*, formed by alums of DC Comics—plus challengers including *Vanity Fair*, *BuzzFeed*, *Gawker*, *Vice*, the *Paris Review*, and *New York* magazine. The league games differ slightly from the others: There's an umpire, and both teams keep at least two women on the field at all times. The 12-game season culminates in a two-round playoff on a Saturday in September. League game or no, the real prize is bragging rights.

The *High Times* softball dynasty is at least partly a byproduct

of the booming marijuana industry. Weed is, by far, the most commonly used "illicit" drug in the country. And while consumption of most others—cocaine, painkillers, hallucinogens—is little changed or in decline, marijuana use is growing. Over the past decade, it's increased by more than 20 percent, according to the most recent National Survey on Drug Use and Health. When the Bonghitters first took the field, no state allowed marijuana of any kind. Today 23 states and the District of Columbia do.

"It used to be, guys would come over to our bench after the game and smoke something they hadn't encountered before," says Safir, who's played for the Bonghitters since 2010. "Now guys on other teams will come over and be like, 'Hey, I was

Their opponents



and

get

a

just in Colorado last week. Check out what I brought back."

The mainstreaming of marijuana has helped *High Times* thrive despite the downturn in print media. In the past 18 months, Safir says, the magazine's page count has grown from 136 to 160. Online readership has risen from less than half a million unique visitors per month in 2013 to 5 million now. In April, its Cannabis Cup in Denver—a convention cum concert cum weed-growing competition—drew 50,000 attendees.

This success translates to stability for the team. Media softball rosters are flexible, a mix of current and former staffers, friends, and friends of friends. There's occasional grumbling about "ringers," but usually the only credential you need is

an invitation. Still, every team needs a few regular employees. Typically, there's an employee who schedules games, recruits players, sets lineups, and makes sure somebody brings a bat. Each team also needs a keeper of the park permit; the best fields and time slots are almost impossible to get if it lapses. So staff cuts or overhauls can be catastrophic. (This magazine's once mighty team fell apart in the transition from *BusinessWeek* to *Bloomberg Businessweek*.)

For the Bonghitters, the first key to winning is showing up. "It's a brotherhood of people who love the herb," Big D says during the bottom of the third inning. He and his friend David, another team veteran, who also declined to give his full name,

They show up to party, too, of course. During the rout of the *Journal*, teammates and spectators in the bleachers pass around joints and a bong fashioned from a travel mug. (To be sure, not all the Bonghitters smoke at games.) Afterward, the team's "bartender," Junius Morgan, peddles sour apple mojitos and Coronas. "He's the original Central Park hustler," Safir says. "He's always at our game with his battery-powered blender." Morgan says he mostly works as a personal trainer these days, but he still serves drinks for the Bonghitters, because "they are the ones who got my name known in the park." An hour after the game's over, well past sundown, 50 or so revelers are still laughing, drinking, and smoking. The police generally leave them alone, Safir adds, and the crowd is careful to clean up.

According to the National Institute on Drug Abuse, "impaired body movement" is one of the primary side effects of cannabis intoxication. In the dugout with the

Bonghitters, I speak to Daniel. He joined the team because his "friend's father used to work with a guy whose son is the former editor." He's wearing knee-high socks adorned with pot leaves. His eyes are glassy, and he giggles a little at the end of every sentence—he seems like he should be locked to a couch somewhere. But when Daniel goes back out on the field, he stabs a hard one-hopper up the middle and makes a laserlike throw to first.

Watching him, I wonder if being high could make one a better softball player. "These guys have such incredible tolerance," Mitch Earleywine explains when I call to ask about my hypothesis. Earleywine is a professor of psychology at the State University of New York at Albany and the chair of the National Organization for the Reform of Marijuana Laws, an advocacy group. Because the Bonghitters are accustomed to playing softball stoned, he reasons, they have strong "behavioral tolerance." The drug doesn't make them sharper; it just doesn't dull them as much as you might expect.

Earleywine has another idea about how weed may benefit them. In 2009 the *Journal of Studies on Alcohol and Drugs* published research that looked at marijuana "primes," or pictures and words associated with the drug. Primes sometimes bring out intoxicated behaviors. And *High Times* is a prime. Sober students who looked at one of its covers and then did math problems performed worse than those who were shown a gardening magazine—though only if they believed marijuana causes cognitive impairment. So, if you think smoking weed makes you dumber, just looking at a picture of it can have the same effect. In Earleywine's theory, the Bonghitters are walking primes. "The softball team

is a giant marijuana cue," he says. Their opponents see them and get a little clumsier, like a bad contact high.

The Bonghitters have a simpler explanation for why they win. "One of the reasons we're really good is that we actually work at it a little bit," says David after the game, holding a Bud tallboy and passing around a joint. Safir sometimes hold practices to keep everybody sharp. After they clobbered the *Journal*, some of the Bonghitters took extra swings before joining the party, preparing for the coming playoffs. On Sept. 19, they'll be back at Central Park to defend their title against WNYC, *Forbes*, and the *Journal*.

As the sun sets, Agueli cradles a beer in his mitt. "The thing about us is, if we catch the ball we win," he says, through a haze of smoke. "And we always catch the ball." Deep. **B**



were milling on Central Park's Great Lawn one afternoon in 1994 when Steve Bloom, an editor at *High Times*, invited them to play. The Bonghitters have their share of editors, writers, and company attorneys, but random encounters like this have filled out the squad. Luigi Rafael, a 28-year-old native of Curaçao, happened to have a bat sticking out of his backpack one day when the Bonghitters were short on players. He looked the part—Atlanta Braves shortstop Andreton Simmons is his second cousin—so they asked him to step in. Rob Agueli became the Bonghitters' starting pitcher after he helped bankroll *High Times*' *Potluck*, a 2002 stoner flick that grossed \$4,827 at the box office. Softball is his payout, he says.

BOSSEST WHITE SHOES EVER

Autumnizing a summer staple

It began with dudes taking off their ties. Then they started wearing hoodies and growing beards. And now pristine white kicks—worn with navy suits by managers, or with jeans by the coder bros—are the latest office-casual standard.

The style came off the tennis court in the early 1960s, when Steve McQueen made Keds famous. In recent years, hundreds of brands have pushed them, from Italian-made Common Projects down to Adidas, whose iconic Stan Smiths covered tons of trendy commuting feet this summer. Their popularity helped the sneaker industry grow to \$55 billion in 2014, according to *Forbes*.

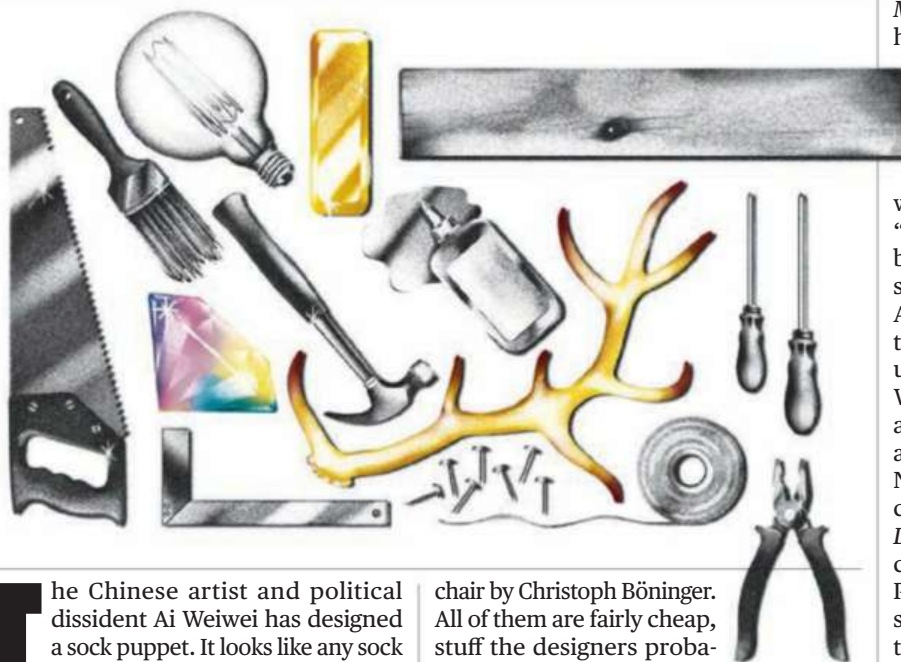
So go ahead and wear white shoes after Labor Day. Actually, K-Swiss released its Washburn (\$85) in September for that purpose. They're slightly heavier than other trainers, with a thick rubber sole and cap-toe detail that riffs on the look of dress shoes. The upper, made of smooth nubuck, features minimalist details and the shield logo the company revised last year. They're also just incredibly comfortable. A month of regular wear passed by pain-free; the shoes molded into pillows for my feet but never started looking soft. Keeping them white is on you, though. **B** —Kurt Soller

The Washburn comes in men's sizes only. But the **Classic** (\$85), a slightly less bulky court style, is a great women's option. With either, use **Jason Markk Quick Wipes** (\$11; jasonmarkk.com) to brighten up on the go.



AREN'T YOU CRAFTY

Phaidon tries to sell DIYers on an arty manual full of absurd projects. By Caroline Winter



The Chinese artist and political dissident Ai Weiwei has designed a sock puppet. It looks like any sock puppet, with button eyes and a blobby body, but the creature is an alpaca, he says. One Chinese word for alpaca, *caonima*, is similar to the phrase *cao ni ma*, which means “f--- your mother.” Recently the animal has become a symbol of protest against China’s Internet censorship.

Now anyone can “cao ni ma.” The artist contributed step-by-step instructions to the guide *Do It Yourself: 50 Projects by Designers and Artists* (\$29.95), from Phaidon, the British art and design publisher. “This idea of making something that Ai Weiwei thought through is quite amazing,” says Emilia Terragni, a publisher at Phaidon. Inside, there are also how-tos for a lampshade by Yves Béhar and a wheelbarrow

chair by Christoph Böninger. All of them are fairly cheap, stuff the designers probably wouldn’t design to sell for profit. Still, Terragni says, “you can recognize their style.”

Phaidon is known for high-gloss hardcover books full of beautifully made expensive things. So this foray into DIY feels odd. Even the author, design journalist Thomas Bärnthaler, admits this in the introduction: “Designer objects you can make yourself? Actually, that’s a contradiction of terms.” To help bridge that gap, *Do It Yourself* has a lustrous, coffee-table-worthy cover, but the pages inside are rough, newsprintlike paper. Each project is confined to four pages. Within that tight space, there’s an artist bio, a description, a list of materials, measurements, assembly instructions, and, of course, beautiful color photos of each

finished item. Phaidon wants the book to appeal to “design- and budget-conscious young professionals,” says spokeswoman Meg Parsont.

DIY books go back decades. In 1968, Stewart Brand created the popular *Whole Earth Catalog*, which focused on self-sufficiency and ecology. Then the Internet transformed makerism into a mainstream hobby, and blog-to-book deals such as *P.S.—I Made This...* and *Design Mom* became top-sellers. Now YouTube has thousands of would-be stars teaching you to paint like Picasso or build a helicopter. Etsy, the online market for unique handmade products, had sales of almost \$2 billion last year.

Given the countless digital tutorials, why bother putting out a rarefied manual? “I still believe books are very helpful, because someone put in the time to make sure everything works,” Terragni says. A better motivation is that titles such as this—whether on cooking or gardening or upgrading your closet—usually sell well. While book sales are down overall, the art and home-improvement categories are both thriving, according to data from Nielsen BookScan. So Phaidon is smart to combine the categories. The concept for *Do It Yourself* originated from Bärnthaler’s column in a German newspaper, and Phaidon helped him reach bigger names, some of whom had, or probably wanted to, put out their own books with the publisher. Everyone contributed their crafts and instructions for free.

The only problem is that none of them thought through the resourcefulness required to locate an artist’s materials. I gave up on making a pretty oilcloth-covered vase by designer Stephen Burks after finding that even New York’s best fabric and art stores don’t carry oilcloth. Next I tried to build a sleek Gesa Hansen desk lamp, which supposedly costs \$100 to make and takes 130 minutes. It took much longer to discover that Manhattan hardware stores, and even Home Depot, carry only ugly versions of the materials. Before giving up, I went on the Internet and found most of the required parts. At least I knew what to order online. **B**

READ, SKIM, SKIP

DESIGNING THE WORLD

READ



Strange Tools: Art and Human Nature
By Alva Noë

A philosophy professor at the University of California at Berkeley uses the history of thought to argue for art as a way of organizing human experience. It’s heady stuff, but he brings it down to earth in clear, friendly prose.

SKIM



Cabin Porn: Inspiration for Your Quiet Place Somewhere
By Zach Klein

The stories about outdoors enthusiasts are fine, but skip to the pages with Noah Kalina’s photos of lust-inducing escapist dwellings—they might give you a Thoreau complex.

SKIP



World Monuments: 50 Irreplaceable Sites to Discover, Explore, and Champion
By Andre Aciman et al

Kudos to Rizzoli International for supporting the World Monuments Fund. But this is basically a boring encyclopedia. And the places look better on Google Images, anyway.

Etc.



**Atelier
Cologne Jasmin
Angélique**
\$210

So light and lovely, it's even safe for the elevator.

**Maison Francis
Kurkdjian Aqua
Vitae Forte**
\$275



**Diptyque
Essences
Insensées**
\$175



Classic and slightly glam, it's nice if you're dressed up.



Arbonne Sky
\$55

**Norman
Norell
New York**
\$150

Breezy citrus will distract you from depressing drop ceilings.

Calming on a morning when you're frazzled.



**Coolife
Le Troisieme
Parfum**
\$175

CREATIVE

68

A futuristic fragrance, with pink pepper, iris, and helvetolide—a new-school synthetic musk.



**AJ Arabia
Black I**
\$265



**Memo Paris
African Leather**
\$250

The heavy notes of cinnamon and cardamom work well for the holiday party season.

**Nomenclature
Adr_ett**
\$165



**Arquiste
Nanban**
\$190



Intriguing and ultramusky. Spritz this on when you need to draw some attention.



**Maria L
Yours Deeply**
\$160

ARE THESE FOR MEN OR WOMEN?

All are more or less unisex, though the bottle designs hint at how each is marketed.

FALL FRAGR

Time for a new scent. We tested dozens of options to pick 23 stan

RESH

Beauty

Etc.



**Michael Kors
Extreme Blue
\$78**



**Lanvin
Éclat
d'Arpège
\$82**

**Aramis
Black
\$70**



**Penhaligon
No. 33 Eau de
Cologne
\$100**

Smells like
celery—
in a good
way.



**Cartier Must de
Cartier Gold
\$150**



Bold hints of bergamot
and vetiver may
inspire confidence.
Wear when you ask for
a raise.

**Ermenegildo
Zegna Acqua di
Bergamotto
\$110**



CORPORATE

**Tory
Burch
Absolu
\$130**



Mellow rose and
tuberose are
ideal for a casual
client lunch.

Superstrong.
Try it if you're
the boss.



**Annick
Goutal
Les Absolus
Oud
\$280**



**Boss
The Scent
\$85**

**Sisley Soir
d'Orient
\$278**



**Polo Ralph
Lauren
Supreme
Leather
\$125**



Like a vacation in a bottle,
with notes of Californian
lavandin, Italian bergamot,
French jasmine, and
Bulgarian rose.



**Krigler Sierra
Vista 2142
\$330**

USKY

ANCE FINDER

douts—choose the best one for your nose and office environment

THE FEE FIGHTERS

Two brothers make bank by calling and getting your bills reduced. By Claire Suddath

When Evan Diamond, office manager at an iPhone repair outfit called iCracked, realized his company's telephone bill had grown to \$1,500 a month, he could have haggled with AT&T Wireless himself. "But I didn't want to stay on hold for 30 minutes or get hung up on over and over again," he says. "I value my time."

While browsing the forum website Reddit one day, he came across BillFixers. It's a service run by brothers Julian, 25, and Ben Kurland, 22, who wrote a Reddit post offering to negotiate fees for anyone who asked. They expected one or two responses, then 17 people immediately got in touch.

Diamond was one of them. It took some calls and a few hours, but the Kurlands reduced iCracked's monthly telecommunications bill to \$646 and secured the company a bigger data package and unlimited messaging. Since then, the brothers have worked as a proxy for more than 500 customers, who've saved an average of \$300 each a year. They typically split annual savings halfway with their clients.

"This comes from a place of not wanting to let these companies get away with what they

charge," says Julian, who for years had the strange hobby of negotiating his friends' cable bills. As of last summer, he was working for the Tennessee Department of Environment and Conservation. Ben had just graduated from college and was looking for something to do. Since starting their business, they've made tens of thousands of dollars in commissions.

Despite all the various life-hacking sites that will teach you how to reduce

your cable bill, a recent *Consumer Reports* survey found that fewer than half of people who attempted to do so were effective. Services such as BillCutterz have been offering some relief, but the Kurlands say their success rate—94 percent—is higher. It usually works out because they're annoyingly persistent. Calls can last several hours as the brothers are passed among operators, managers, and various departments. The Kurlands often call companies multiple times, looking for different representatives who will cut a deal. "You'll talk to three people who won't offer anything, and the fourth one will magically have a discount that no one mentioned," Ben says.

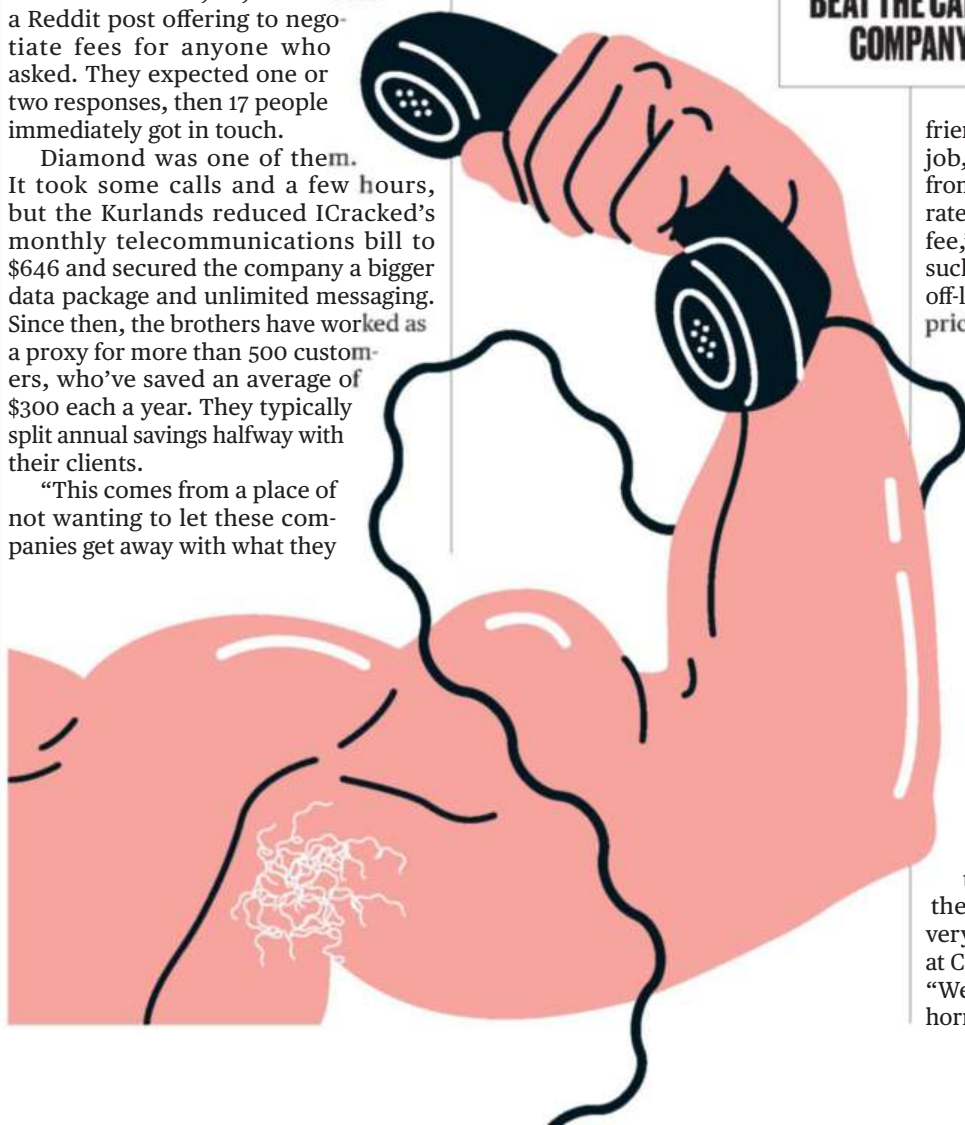
As client volume has increased, the brothers have learned that certain things are easier to squabble over than others, such as the cable box rental fee many TV providers charge. They had to hire their cousin to help them man phones, and they leased office space—well, actually, they snagged a free deal from family

friends. BillFixers became their full-time job, and they now take on everything from gym memberships to car insurance rates. "Basically anything with a monthly fee," Ben says. Bills with more liability, such as medical and credit card bills, are off-limits. If the brothers don't get a lower price, services are free.

None of the companies the Kurlands approach seem to mind that the bills aren't in their name. "As long as you give us your billing account information so we're authorized to call on your behalf, they don't care who they're talking to," Julian says. Nor have the companies figured out the game BillFixers is running; if they have, they don't say anything.

The easiest deals so far are with AT&T, which usually has been willing to chop its monthly cell phone fee. T-Mobile, on the other hand, rarely gives in, because its prices are lower than competitors'. Comcast, the brothers say, is by far the worst to deal with. Both regularly find themselves cut off or transferred to the wrong departments. "There's one very unhelpful representative in billing at Comcast we know very well," Ben says. "We have a theory that every Comcast horror story is actually just about her." **B**

**WITHOUT HELP,
FEWER THAN
HALF OF PEOPLE
BEAT THE CABLE
COMPANY**



AMY BOHUTINSKY

40, chief operating officer;
Zillow Group, Seattle

What's your job?

I joined the real estate company 10 years ago, before we launched. My role is to turn it into a household name.

What's the dress code?

Our headquarters is in Seattle, it's tech, and our brand is approachable.

CALYPSO ST. BARTH

STELLA & DOT

Has Seattle changed your wardrobe?

I have tried not to let it. When I moved here, I challenged myself to never wear fleece to work. On a gray, rainy winter day, it's tempting.

TARGET

Does a professional blow out your hair?

I do it myself. As long as I can keep it long, I will.

SINCLAIR

CLARE V.

What's your day like?

It might start with playing on the floor with my kids and end with a quick work drink or hopping on a flight. I go to a Bar Method workout in the morning, so I'm always dressing out of a bag.

Do you own a lot of bags?

I probably have 15 that I regularly rotate through, from cheap to Gucci.

Nice boots!

My husband, who has great taste, gave me these for Christmas a few years ago. They're this amazing soft leather.

B.Z. MODA

How often do you use the Gucci one?

I'm afraid to. I'm on air-planes a lot, and it rains in Seattle. I often go with one that, if it wears out, I'm not going to be devastated.



ARNOLD DONALD

President and chief executive officer, Carnival Corporation

"I grew up in the Ninth Ward, and my parents took in 27 foster kids, along with the five of us. We were dirt-poor, but as a kid you're just having a good time."

With wife Hazel on a cruise, 1997



"I had a buddy from school in private equity. I said, 'I have a great deal for you.' So we took Merisant out of Monsanto through a private equity deal. We made the sweetener Equal and around 19 other brands with aspartame around the world."



"I should've been begging for the job, because it's just a hoot—we have the best entertainment and chefs."



In Antarctica, 2014

Education

St. Augustine High School, New Orleans, class of 1972

Carleton College, Northfield, Minn., class of 1976

University of Chicago Graduate School of Business, class of 1980

In high school



Work Experience

1977–81
Intern, supervisor, Monsanto

1981–86
Market research analyst, product supervisor, marketing manager for Canada, Monsanto

1991–93
Vice president, general manager, group VP for North America, Monsanto

1995–2000
Senior vice president, president, crop protection unit, Monsanto

2000–03
Chairman, CEO, Merisant

2006–08
President, CEO, Juvenile Diabetes Research Foundation International

2010–12
President and CEO, Executive Leadership Council

2013–Present
President and CEO, Carnival Corporation

Life Lessons



"We went all over the world. In every little nook and cranny, there's agriculture."

"I said, 'I'm a corporate animal. You don't want me running a nonprofit.'"



With Desmond Tutu during the 2014 Grand World Voyage

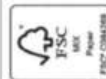
"It's an African American executive association for CEOs and high executives, by invitation only. The purpose is networking and promotion of diversity."

"I was on the board for 12 years, and then the director asked me. The thought had never crossed my mind."



"It can be done."

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Courtesy subject (6) Alamy (3)

The device your
business deserves
The phone your
employees desire



SAMSUNG
Galaxy
S6 edge

The Samsung Galaxy S6 edge is as powerful as it is elegant. With our fastest mobile processor and the first-ever dual-edge screen on a smartphone, the Galaxy S6 edge is coveted by businesses and employees alike. Enhance the productivity of your workforce with 3x more RAM than the iPhone 6* and defense-grade security. This is the solution to get your business ready for whatever comes next.

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SAMSUNG
BUSINESS

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